

THE  
**SOUTHERN AGRICULTURIST.**

NOVEMBER, 1832.

---

**PART I.**

**ORIGINAL CORRESPONDENCE.**

---

**LXXXIV.**—*An Address delivered before the Agricultural Society of South-Carolina, September 18th, 1832; by*  
**EDWARD R. LAURENS, Esq.**

Mr. President and Gentlemen:

IN entering on the discharge of the duty which your favourable notice has assigned me, I have been the rather induced by a desire to comply with the expressed wishes of my friends, than actuated by the dictates of my own judgment; for in good sooth, it were idle vanity in me to venture upon an agricultural essay before an audience so far better versed in both its theory and practice, than the humble organ whom they now honour by their presence. Nay, further, knowing as I do, that my views as to the course of policy which should be adopted towards that class of our population, on whose immediate services all agricultural experiments must in this country mainly depend, are confessedly heterodox and unpopular among, by far the greater portion of my fellow-citizens, I might even say of my immediate auditory, I had well declined your appointment, did I not conceive it the duty of every one openly and fearlessly to express and inculcate, if possible, their honest convictions on all important points of public interest, when called on so to do by such abundant authority as that in obedience to which I now address you.

Without further apologetic preface, then I would venture to call your attention to three general points, on each of which most slave-holders are somewhat distrustful, although but few admit with me the extenso of the doctrine, that each of them jeopard the very institution of slavery, and threatens, unless vigorously and energetically opposed, to engulf the whole Southern country in utter ruin, and to cause those smiling climes, on which heaven now showers its choicest blessings in beneficently wild profusion, hereafter to be known but as "howling wildernesses." Foreign philanthropy, (if it be not a mere prostitution of the word) domestic mismanagement, and an intermediate population, are the three major evils which all slave-holding communities have to contend with, and on these heads I would crave your indulgence for a few moments. These subjects I do not now for the first time approach. I have, in more than one instance, spoken avowedly and unequivocally thereon; in my mind they have received all that careful and matured attention to which their vital importance, as respects our local interest, so pre-eminently entitle them; and at the risk of being classed among timid alarmists, I would hazard the assertion, that there are no questions which could possibly be brought before the slave-holding States fraught with such soul absorbing—such harrowing intensity of interest. They are not merely questions of profit or loss. It is not only that they may occasion the entire loss of our operatives, and the necessarily consequent ruinous depreciation of our lands; but it is the mode and manner by which these evil ends would be attained. It is, that events the most awful and baneful would concurrently happen—it is that, while these results were being accomplished, devastation and dismay would reign throughout the land.

Foreign philanthropy is peculiarly employed in devising ways and means for the amelioration of that class, who, but that they are called slaves, are in the enjoyment of far greater privileges—in fruition, of far greater comforts, and are, in one word, in situations far more desirable and enviable than the operative peasantry of any known country upon the globe. We are not prepared to deny that the situation of the slave is inferior to that of the master; but the most favoured country, under the canopy of God's heaven, affords us equally apparent distinctions in the lot

of man, for Utopia, as yet, exists but in the exuberance of a cultivated fancy, and where else shall those whom the Divine Dispenser of all good has blessed with an abundance of this world's treasure, want opportunity in their own immediate vicinity of gratifying the innermost cravings of a charitably disposed heart—where else shall we look for an exemption from those ills which fallen flesh is heir to—where else shall we see the good man unable to find an object for his charity and kindly sympathy—where else shall we be told that sickness, and sorrow, and want, are unknown—that all around are happy, and that the world were to them a paradise, did they not know that others lived who shared not their blessed beatitude.

The existence of this evil (foreign interference) is as undoubted as it unavoidable—it has its origin in an almost universal principle of the human heart, which induces us always to attach far greater consequence to, and to be far, far more interested in those notes of distress which are wafted to our ears from distant lands, than we are in those which, from being daily and hourly heard amongst ourselves, have palled the taste. It is the very self-same principle which induces us to send out annually large sums for Heathen conversion, whilst our own parishes and homesteads are unsupplied with pastoral care. We must then, from the very universality of this feeling, expect the people of all non-slave-holding communities to be peculiarly anxious for the welfare and protection of our negroes, heedless of the misery and distress which exist under their own eyes. It is an evil not to be avoided, but it is not the less, therefore, our bounden duty to take the precautionary measures for checking its progress; knowing that the people of these communities will interest themselves in behalf of those whom our policy makes slaves, and that in their ardent aspirations after universal emancipation, they will indirectly incite our people to rebellion—some from honest and conscientious, although wrong-headed motives—many from culpably heedless inadvertance—none, I trust, with deliberate design—none knowing that their ends could not be attained until our country had been laid waste—until our household-gods had been torn from their most sacred altars, and polluted in the dust—until depravities, in bare contemplation of which the soul sickens, had been committed amongst us—until all,—the old, venerable in their grey hairs—the



young, interesting in their ingenuousness—the virgin and the matron, and the little children, “*nescios fari*,” had been engulfed in a community of ruin. The only remedial agent which we can apply to this abundantly existing evil, is a strict and uniform system of internal police—and, to the Legislature of our State, we must look for its application—that body has the power of doing every thing that human means can do for the suppression of all foreign interference with our local policy. Severe legislation would be ultimate mercy, and all inflammatory publications vend- ed in our country, whether written, or printed books, or pamphlets, or the yet more insidiously stamped calicoes and handkerchiefs, which made their appearance some time since, should occasion the visitation of our highest legal penalty on all persons therein concerned, directly or indirectly, with or without the intent of creating a servile excitement.

Upon the subject of domestic mismanagement, I am free to confess, that I speak with exceeding reluctance and great diffidence, called on, as I am most decidedly to oppose the theory and practice of many with whom I would gladly coincide, did I not see manifold dangers in the system which they advocate. It has been gravely and ably argued before this very audience, and by one\* whose many virtues have more than endeared him to his friends and to the public, that we are conscientiously bound to afford our slaves the means of moral and religious improvement. How?—by education! Let us examine the assertion. So far as regards their religious instruction, if orally communicated and with duly observed caution as to the instructor and his audience, I should be disposed to agree with the hypothesis as laid down in its fullest extent, and would willingly appropriate a tithe of my income for the attainment of so desirable an object; but this instruction should be strictly confined to the people of the individual plantations, and large assemblies from the neighbouring settlements should be positively and invariably prohibited, otherwise these meetings, for the ostensible purpose of religious instruction, taking place (as they would of necessity) during the hours of night, might often be devoted to other purposes than those of worship and

\* C. C. Pinckney.



adoration. Above all, great care should be taken in the selection of the instructor, and all instruction should, be strictly speaking, by "word of mouth," for the great objection to elevating the slave in the scale of intellect, is this, that knowledge is power; and that of all other agents, we should most scrupulously guard against the moral influence of intellectual endowment. It is, indeed, a cheering thought to the heart of a true philanthropist, that he is instrumental in causing light to be shed in bright effulgence on that mind, which was but a moment since wrapped in worse than Egyptian darkness; but the hallowed image would be immediately dismissed from the fancy that had fostered it, when, looking beyond the present moment, it becomes convinced, that the very mean resorted to for measurably elevating the class, would be the cause of creating an aspiration towards that eminence which they cannot in safety be allowed to attain. The ordinary degree of knowledge which most negroes would arrive at, even under favourable circumstances, is, probably, but small, yet it is by all allowed, that "the desire of knowledge increases in a direct ratio to its acquisition," and, unless we could say, "thus far and no further shalt thou go," true policy would dictate the propriety of wholly prohibiting them from learning either to read or write. The law, on this subject, as it at present stands, is a perfect dead letter, forbidding their being taught to write, although it inferentially allows the acquisition of that power, by allowing their being taught to read. The fanatical zealot who in all matters not immediately connected with his individual interest, looks beyond the things of this world, shudders at the thought of prohibiting any of God's creatures from reading his inspired writers, and unhesitatingly denounces the law which would prevent the acquirement of this ability as unchristian, inhuman, and only worthy of barbarous and uncivilized eras. It would, indeed, be unfortunate for us, were this invective true, as a law of this tenor is absolutely necessary, and will continue to be necessary, until man can eat of the tree of knowledge and not know evil, or, in plainer parlance, until those of our negroes, who are taught to read the bible, shall be unable to read Walker's pamphlet and other incendiary publications.

Another important error in our local policy as regards our slaves is, the license they are often allowed of carrying

on occupations, the very nature of which relieves them in a great measure from the wholesome restraint of a master's eye; difficult as it would be, at this late day, to legislate for a removal of this evil, the public mind should nevertheless be directed towards effecting now a partial, and eventually an entire remedy. Our slaves should not be allowed residence within the city in greater numbers than are *actually necessary*, and although it were impossible now to effect their entire removal from the several situations which they hold as draymen, stevedores, wharf-labourers and mechanics, still, much might be done in the way of proffered bounty to white emigrants, and in the course of but a few years we should have amongst us a far more effective, and a far more wholesome order of population. So far from even attempting this course, however, our local legislation has tended directly to the reverse, and we may, in some degree, consider the great redundancy of slave mechanics among us, as the effect of a law which was honestly intended to benefit the mechanic interest, but which has only operated to make the rich richer, and to throw still further difficulties in the path of the poor young white man, just relieved from his indentures and struggling his way upwards. I allude to the law which exempts from extra taxation the slaves of a mechanic, engaged in mechanical pursuits, under the direction of their owner. It will be seen, at a glance, that the influence of this law tends to the almost entire exclusion of white journeymen, and renders it the peculiar interest of the master-workman, either to make apprentices of his slaves, or to buy up those of a similar mechanical pursuit with his own, as he will thus be enabled to work far cheaper than he could possibly do, did he hire or employ white journeymen. The law stands in the ordinance book of our city, and it is passing strange, considering the great influence which the white mechanics of Charleston have over so small a body as the municipal council, that it has been allowed to remain there so long.\* But, independently of the supply of white artizans which would be afforded us by emigration, concurrently with protection and encouragement afforded them, we have within ourselves ample materials to remedy the existing evils attendant

\* It may be fair to observe, that all the mechanics whom I have known or met with at that board, have been in favour of the law, and have invariably resisted all attempts at its modification or repeal.

on their exclusion. If public spirit could possibly be so wrought upon, that men in office became not terrified at appropriations of the public money, a Mechanic Institute connected with the Orphan-House Asylum, and liberally endowed, would do more towards resuscitating our City and State, than any scheme of which I have as yet had cognition. Children are received into that institution (the Orphan-House) as soon, as in the language of the rules, "they are able to take care of themselves," or in other words so soon as immediate nurses can be dispensed with. Boys are retained until the age of fourteen, and are instructed in reading, writing, spelling, grammar, arithmetic and geography. Girls are retained until the age of twelve, and are instructed in the same branches of education as the boys, with the exception of the last mentioned. Now, if with this munificent charity, a Mechanic Institute were connected, the most happy and beneficial results would be attained, and we should have the cheering gratification of knowing that those whom the All-wise Disposer of events had in his providence been pleased to deprive of the aid and assistance of parental countenance and support, would be nursed and cherished from their infancy upwards, even unto manhood, and our reward would be the increase in wealth and power of our City and State, from the increased and increasing security afforded us by a redundant white population. That a Mechanic Institute of this nature for the boys when discharged from the Orphan Asylum, and a Working-House for the girls, would have the effect of purifying and raising the general character of our population, I have so little doubt that I would not scruple, did I possess the power and influence necessary therefore to risk my reputation on the venture.

*(To be continued.)*

---



ART. LXXXV.—*Memoire on the Strawberry.*

Read before the Horticultural Society of Charleston, by the President, Judge  
WILLIAM JOHNSON.

As the season is now at hand which invites the attention of the horticulturist to his bed of Strawberries, I will solicit the attention of the Society while I submit a few remarks on this favoured protégée of our institution. The practical character of the body I have the honour to address, might excuse me in confining myself to the mere cultivation of this delightful fruit; but when gentlemen unite in associations for patriotic purposes, they may surely be indulged in sacrificing something to taste, and in blending the pursuit of the useful with the gratification of a laudable curiosity; or even in amusing speculation, as far as it contributes to furnish topics for literary inquiry or spirited conversation.

I shall not detain my auditors by an eulogy on the many excellencies of this admired fruit; the sense of this Society on the gratification it affords to the eye, to the smell, and to the taste, has been amply acknowledged by the effort we have made to render it like gold in the time of Solomon, as common in our markets as the stones in the streets.

A happy augury of ample success has already appeared in a spirited effort of one of that sex, who were born only to add to the cultivated taste and rational enjoyments of life; nor will the employment be deemed at all unappropriate when it is recollected that the fruit and the root furnish, the one an essence, the other a cosmetic, considered by the Parisian belle, as not unworthy of the charms which they contribute to embellish. And the time cannot be far distant when the early production and cheapness of this article will impress on every mind, the propriety and duty of giving a preference in cultivating and improving our own native productions.

That the Strawberry is a native, and is susceptible of immense improvement from cultivation, are unquestionable facts. Scarcely is there a region between the Polar-circles where the foot of the early hunter may not chance to be stained by the juices of this dainty esculent. It is, however, true, that from the multitude of birds that feed upon it, from its ripening at the height of the time of ornitho-

gical emigration, and the inconceivable rapidity and length of the flight of some of the winged species, the fact of its extensive diffusion is not conclusive to prove either its general or even domestic origin, (for it may have been brought by the birds from Asia,) yet I will be indulged with a remark to shew, that we have no inconsiderable grounds of claim to the honour of having given it to the world; the best species known, America, if not Carolina, most certainly has introduced into Europe, to wit, the Scarlet, the Chilian, and Carolinian, and probably the Hautboy. I think it very questionable whether the Strawberry was at all known to the antients. It is hardly possible to conceive that among a people so luxurious as the Romans, so devoted to the enjoyments of the table, and especially to those enjoyments which horticulture afforded; a people, who held the culture of the earth in such high honour, that the most distinguished of their statesmen and poets have left us instructions for cultivating a Leak or a Squash, a Plum or a Crab-tree; a fruit so early, so fragrant, so beautiful, or so salubrious, as the Strawberry, should have escaped a passing notice in their books, or not have found a place on the farms in the vicinity of Rome, had it been known to them. Yet, in no one of their writers on geoponics have I been able to find a hint on its cultivation, nor even a name for it. It is true, that in our Latin dictionaries we find the word *fragum*, and find it translated a Strawberry, and a derivation fancied for it, from the word *fragro*, in consequence of its flavour, or according to others *frigida*, and others *frango*, all, perhaps, of at least, questionable authority when referred to the general laws of etymology. And it is true, also, that from the term *fragum*, our botanists and cyclopedists have the word *fragaria*, the received name of the Strawberry; and of which it is said in Rees, and I think, in the French Encyclopedia of Knowledge, "that it was so called by the Romans on account of its fragrance:" but if the term *fragaria* is to be found in any Latin dictionary I am unacquainted with it. In Littleton and Ainsworth, it is not to be found, nor in any ancient author that I know of. The term *fragum* is to be found in one author, and I think the former is fully proved to be a modern substitute for it, by the fact of borrowing from Littleton the etymology assigned to it.

It is then only necessary to examine the word *fragum*, and to determine whether it was our Strawberry that was known to the ancients under that name. I think the evidence is full on the negative.

If the word *fragum* is to be found in Virgil, Cato, Varro, Paladius or Columella, it has escaped my eye. In Pliny's Natural History it is to be found; and in his Translator Holland, it is translated into English as the *Ground Strawberry*. But let Pliny speak for himself as to the description of fruit to which he applies that epithet. Every one knows that the *arbutus*, so frequently met with in our Latin books, is rendered by translators the *Strawberry Tree*. And the fruit of that tree is so proverbially harsh and uneatable, that it received, as Pliny says, the epithet *unedoni* from the impossibility of eating more than one at a time. Yet Pliny speaking of the *arbutus* and the *fragum*, and of the resemblance of their fruits, calls them *congeneres*. This is in the first instance of his mentioning the word *fragum*; but, as if to remove all doubt, he mentions it a second time, and then ranks it among plants "springing spontaneously and bearing thorns or prickles."\*

It is hardly possible to avoid referring this description to the Blackberry, which in its progress to maturity is red, and harsh enough to be well denominated a *congener* of the fruit of the *arbutus*. To these considerations it may be proper to add that the Greek word given by Littleton, and I think Ainsworth, for *fragum*, is that which the Lexicons give to the *arbutus*. *Fraga* is rendered *la Komara* in Herdericus, and *Komaros* the *arbutus*.

I have noticed the vast improvability of the Strawberry, as one among the many inducements to its cultivation. The full value of this characteristic is only known to those who have been engaged in improving it. The Chili Strawberry is in various writers represented as reaching to the wonderful size of a walnut or a hen's egg. I have myself witnessed facts sufficient to produce the strongest conviction, and most confident expectation on this subject. Strawberries, originally no larger than the end of one's finger, have, in my garden, in a few years, attained to treble that size. Three inches in circumference is of very common occurrence, three and a half very frequent, and in one

\* Plin. Nat. His. ii vol. pp. 206, 713.



instance, we measured one four and an half inches. Yet I know that my avocations have always disabled me from doing justice to the article. Perhaps, however, there is little to be gained from raising it beyond the circumference of three inches. At that size the plant bears abundantly and the fruit makes a fine exhibition on a table. The very largest would probably not bear so well, and would hardly ripen through before some bird or insect had inflicted a disfiguring wound upon an object so tempting and so conspicuous. Thus we are informed, that the great Chili is not a favourite among the gardeners of Europe, from its unproductiveness, while the early productive and brilliant Carolinian is much cultivated. Indeed, it would seem to have gained upon the Chili by cultivation, until it has either superseded it altogether in England, or to have substituted its name for the latter.\*

It has been a subject of no little discussion among the learned, whether all the different species of Strawberry are any thing more than mere varieties. To vulgar senses, the form, colour, growth and flavour of the fruit present sufficient characteristics to distinguish the kind and assign them their respective names; but the learned have been obliged to resort to the form, colour, pubescence, and other circumstances of the leaf, the stock, &c. I have never cultivated but two kinds, and those are the two most familiar in our horticulture. The Hautboy which some think a native of Louisiana is one; and the other is one which, from having repeatedly found it in our native woods, I shall venture to call the real Carolina Strawberry.

The subjects to be considered by the cultivator naturally distribute themselves under the following heads.

1. Soil.
2. Time of planting.
3. Preparing your bed.
4. Setting out.
5. Dressing an old bed.
6. Care until the bearing season is over.
7. Care afterwards.

1. *Soil*.—In the choice of soil, the Strawberry appears to manifest no fastidiousness. We find it growing natural-

\* *Fragaria Chiloensis*, Rees.

ly in every description of soil, and surviving in despite of all kinds of neglect and rough treatment. The only exception that I know of is, that the water must not rest *on* or *in* the soil to which you consign it. Also, when growing in our gardens, in a sandy soil, unprotected from the summer's sun, it will perish, unless sufficiently watered. Yet I am inclined to think that in a natural state it affects a soil rather low and clayey. In glades and meadows, and particularly on the immense prairies of the western country, we find it flourishing, and bearing, and enduring in the highest degree for a state of nature; I have not had opportunities of observing, however, whether this may not be attributed to the protection which such places afford to its roots against the summer's sun, and the fires that annually pass over them. It is a common practice with many gardeners to strew their beds lightly with trash, and burn them off preparatory to dressing them; from perceiving, I presume, how the roots sprout and flourish in the meadows after the fire has cleaned them from the accumulations of grass and weeds which grew over them through the summer. But in a light soil and dry situation, I should think it a hazardous experiment. In a moist place or clayey soil, perhaps, it may be as safe as well as an expeditious method of clearing the plants of the dead leaves and accumulated trash of the past year. The soil of my garden was originally a very poor sand, full of nut-grass and very sterile; by the aid of marsh-mud, stable manure, and compost, I have made it very productive in most kinds of vegetables; and such is the only soil on which I have cultivated the Strawberry. A rich sandy loam is what the foreign gardeners recommend, but I should say that the plant would succeed on any soil properly tempered to its habits, and I am well satisfied that in the efforts that are made to bring it to perfection, we oftener make the soil too rich, than leave it too poor. Hence so many beds disappoint the expectations of the zealous cultivator, by giving him abundance of large leaves but very little fruit. There is a medium which it is difficult to describe, but which seems indispensable to success with the Strawberry. A natural tact, or a few experiments will, however be sure to make us masters of it in a year or two.

2. *Time of Planting.*—For the simple purpose of propagation, the Strawberry may be planted during a large

portion of the year, perhaps in any month of the year, in our climate. But it will in summer, require careful watering. And if planted at any time before the first of February, it may produce fruit, but the time to which I have finally confined myself, is from the autumnal equinox to the tenth of October. During that period it takes readily, requires little, if any, watering after the first insertion of the plant, and bears a crop of good fruit the ensuing spring.

3 *Preparing your Beds.*—Putting a bed in high tilth is a standing rule in horticulture whatever be the plant to be cultivated. This, therefore, I assume as having been done. Manuring is another standing rule, but in this instance it must be restricted by the suggestion before made, that a soil may be rendered too rich for Strawberries. It is impossible to lay down any precise rule on this subject, although an all-important consideration in the culture of this article. Much must depend upon the observations of the cultivator, and perhaps it may be enough here to say, and is certainly as much as one can venture to say, that land which will produce a crop of corn of twenty to twenty-five bushels to the acre, will produce a good crop of Strawberries.

Most persons are in the habit of making oblong beds of such a width as to admit of the gathering of the fruit from the paths on each side. And such is the mode recommended generally in the books. But I have long since abandoned it and substituted another which I find more convenient. The size or proportion of my bed is immaterial; for I make small ridges upon it at from eighteen inches to two feet apart, on the summit of which I insert my plants in a single row. There is no loss of ground in this mode of planting, since, with beds at eighteen inches apart, and plants at eight inches distance on these beds or ridges, you have the same number of plants, as if set in the ordinary mode and twelve inches apart each way. The additional labour is trifling, and will be fully compensated by the increased facility in weeding, watering, gathering, and re-dressing. But the principal object in adopting this mode, is to keep the fruit the better off the ground. It is also a neater and more ornamental mode of cultivation, gives a better circulation of air, and your plants bear better and finer fruit when so arranged.

4. *Setting Out.*—This is done by stretching a line along the summit of the ridge, and making holes along under the



line with a trowel by an eight inch measure in a single row; after which, the plants must be watered the same day, and it would be advisable to repeat the watering, if the weather is dry. A little attention to watering at this time will save the necessity of replenishing, when, perhaps, your plants have been hoed up or given away, or the season too far advanced for the sets to take good root before the severe colds, or to produce a satisfactory crop in the spring.

It is hardly necessary to add (for no horticulturist should be suspected of slovenly habits) that the sides of the ridges should be neatly raked and levelled, after the planting is completed.

5. *Dressing an old Bed.*—The books generally maintain that a Strawberry-bed should be renewed every three years. I shall have occasion before I conclude, to consider the question whether it would not be the best economy to renew it every year. But in order to give an option to the horticulturist, I will suggest a method of dressing an old bed, which renders it unnecessary to abandon it at all, and which is necessary to be attended to every year if you would have regular beds and good fruit.

The first week in October, and after filling up the new beds from the select succours of the old, you stretch a line along the summit of the ridge, and draw up a little earth so as to restore the regularity of its form whenever it has been impaired by the rains and other causes between the season of bearing, and that of dressing. You then select young plants from your runners, and replenish the summit of the ridge under or near your line, where the plants have failed, (as many of them always will fail from the ants, the sun, and a worm that sometimes attacks the roots.) When that is done, hoe clean between the ridges and turn up the ground about half a spade deep.

It may be that the bed needs manuring; for either the plant or the exposure of the soil to the sun, produced in cultivating it, certainly does weaken the soil. This is always perceived by the pale hue and stunted growth of the plant, and in that case manure must be scattered before the spading is given to it.

After this dressing, as you can have easy access to every part, care must be taken to eradicate the weeds and nut-grass; for the true reason why the breaking up of the old beds becomes necessary is, that they get foul and exhausted.

By pursuing the method here suggested and drawing up the manured soil to the roots of the plant, I have kept the same bed clean, full, and in heart for ten years, and it may be kept as many more.

6. *Care until the bearing-season is over.*—In common with all other plants, the Strawberry-beds must be kept clean from grass and weeds, the surface occasionally stirred and the earth lightly replaced to the roots. The attention peculiar to the plant consists only in taking off the runners. The mode of doing this I consider all-important to successful cultivation, for the fibre is strong, and whenever jirked off by the hand, the root of the plant is shaken, its tender shoots broken, and its growth always impeded, often entirely put an end to. I hold it to be indispensable, that the runners should be clipped off by scissors, or cut with a sharp instrument. The most simple and expeditious mode is, by fixing the blade of the knife, or something of the kind, obliquely on the end of a short staff so as to do it in a standing posture, and with an oblique cut. This I have always found most difficult to get our slaves to perform as it ought to be done, but it must be enforced or you will find your bed unequal in growth, and uncertain in production.

We find the name of *Straw-berry* attributed in the books to the practice, said to be prevalent among European gardeners, of raising the fruit from the ground by adjusting straw to the root. In our sandy soil, I am fully sensible of the benefits to be derived from the practice, for the fruit becomes gritty, covered with earth, and of an earthy flavour often, when in contact with the soil. Besides which, worms, that never quit the earth, often attack it in that situation and destroy it wholly or partially. But the trouble and difficulty of procuring the straw proper for the purpose have prevented me heretofore from resorting to the practice. This year, however, an experiment to determine how close the *holcus sorgum* (Geinea corn) may be planted in drills, to be productive, has put me in possession of an article and a fact that will enable me to avail myself of this improvement. Thus planted, the *holcus* produces an abundance of straight, slender, tall and durable stocks, and yet, abundantly rewards the cultivator with its grain. These stocks will answer admirably to be applied on both sides of the plant, and can easily be sustained in their places by

pins, until the bearing season is over. I anticipate a great improvement from it, and every garden can advantageously cultivate a sufficient quantity for its own use.

7. *Care necessary after the bearing season is over.*—Those who hear me, if any have never cultivated this plant, will, perhaps, be surprised to know that this is the most troublesome part of the year in cultivating the Strawberry; or at least, that part of the year in which it is most difficult to know what is to be done. From the month of October to the month of June, the beds are kept clear by comparatively small labour, and so far it is an article of very easy cultivation. But from that time, to keep the beds clean and the runners in check, require no little labour, and is always attended with this danger, that by keeping the earth exposed to the sun, the soil is impoverished and the roots exposed to be killed by the heat; an evil which, if the summer is not more rainy than ordinary, will often extend to your whole bed, unless prevented by shade or irrigation. And on the other hand, if you suffer the grass and runner to grow, the grass, if your land is at all in heart, will be apt to kill down every plant and leave you a very feeble stand, if any thing, when you have cleaned up your beds. Indeed, in extracting the roots of our crab-grass, every Strawberry root that remains, if alive, will be so shaken as to endanger its existence, or render it very feeble, besides destroying all your suckers. The great risk of losing even my plants from these causes, induced me to plant peach trees over one of my beds, and these or any other deciduous trees will in a great measure, protect the plants in summer without shading them too much in winter. But, otherwise, we must submit to the labour of keeping clean and watering liberally.

These facts have raised in my mind the doubt whether it would not be good economy to make new beds annually, and only preserve as much of the old as will supply an abundance of plants. It is true, this will be injurious both to the uniform quality and quantity of the fruit. But it will be a saving in labour and care; quantity may easily be supplied by extending the planting, and, if the beds be planted by the first week in October, in a soil of a suitable fertility, the quality of the fruit will be very respectable. I would not be understood as recommending this alternative, but only as submitting it to the consideration of the



experimenter. It will, however, be always prudent, and such is said to be the practice of the European gardeners, to have a nursery of plants in a shaded spot, or one of a northern aspect, and even, then, not to neglect irrigation. For want of attention to this precaution, I have known sundry individuals who had to depend annually on their neighbours for plants, whereas, a prudent manager will always have them to give away, if ever he has once fairly embarked in the cultivation of this article.

Upon the whole, I will conclude with this remark, that success in raising the Strawberry will depend mainly upon—1st, establishing and dressing your beds in the proper season. 2d, Producing the proper medium of fertility in the soil. 3d, Taking away the runners without shaking the roots. 4th, Keeping your beds in good heart and clean; and 5th, Watering and shading without stint when the season requires it, and, lastly, in never crowding your plants unreasonably, for in this instance, may the farmers rule most emphatically be applied, “that the half is worth more than the whole.”

---

ART. LXXXVI.—*Answer to Queries of an Observer on the Culture of Rice; by Q. E. D.*

“Charleston, October 10, 1832.

The queries put to rice planters by your correspondent, “*An Observer*,” are both numerous and important; too much so, to be answered as concisely as they have been propounded: he is not disposed to skim lightly over the subject; he is evidently a practical man, and I will, with your permission, endeavour to answer the questions in the order they assume in the *Agriculturist*.

It is unnecessary to prove the fertilizing quality of the mud; it is a truism to which every man residing on a river, must unhesitatingly give his assent, but the rea-

son or rationale of the thing is seldom adverted to. The mud found in our ditches, consists of deposits from the river water, during the flowing of our fields, or of soil washed from the surfaces of the land and the sides of the banks. That from the river water must fertilize the fields on which it is deposited, because it is, in fact, virgin soil. That which is washed from the banks consists of soil, which originally came from the ditches (when newly cut); it has never been cultivated, and of course contains all the virtue and freshness of new land, with the advantage of being entirely pulverized. This, it may be said is theory, and must be received with caution; grant it, and I will state a fact worth a dozen such theories. The planters (or some of them whom I know) in the neighbourhood of Georgetown, raise their river banks by cutting down the inner river margin, and this dirt thus removed, they replace with the mud thrown from the river ditch in cleaning it. The river margin of course (if mud improves the soil,) is the richest part of the field, and the fact is so. When they think the AVERAGE crop a great one, it is common to hear them say, "the body of the field is as good as the river margin."

To the third query, I am not prepared to give an unqualified assent. I do not think the addition of mud is more beneficial to light than to clay soils; it improves them both very much. To the light vegetable mould, it adds increased luxuriance, as is exhibited in the growth of blades depth of colour, additional height of stalk, and fullness of ear; while, to the stiff and compact clay, it gives looseness and facility of working, and so much to the length of the ear, as to be perceptible to a practised eye before it is harvested.

A few years since, it was not deemed judicious to flow the fields during the winter, especially on those rivers where salts prevail during portions of the year, and if we mistake not, Mr. Myrick forbade it on those plantations which he managed on Cooper river. The reason assigned was, that the land was more or less impregnated with salt, that the water did not destroy it, but only kept it down, and the heat of the summer's sun attracted it to the surface and destroyed the rice. Like many other theories this was plausible and ingenious, but is not supported by facts. The practice is now almost universal to flow the lands, as

soon as the stubble can be removed either by burning or hoeing it off, and the quantity of deposit is very perceptible.

It is difficult to answer the fifth question precisely. Salt is certainly a manure, and I have no doubt that the fertility of some of our best lands, (as for instance those on Cooper river) results very much from the salt which occasionally reaches to its source and injures its crops. But that it would be advisable to put salt water on the land, with the view of enriching it, is by no means so certain. The late General Thomas Pinckney, (than whom I know no higher authority) used to say, that salt-water was an excellent manure, but that it was difficult to fix the dose. There is more in this remark than appears at first sight. If we could always ascertain how salt the water was, and ought to be, and how long it could be kept on, without injury, then we might with propriety use it, but until these circumstances are all well understood, it would, to say the least of it, be hazardous and might endanger the succeeding crop.

To the sixth question, I answer, that it is not sufficient to instruct the trunk-minder to flow the fields at the full and new moon, and then to draw off the water at the end of a week; this will not be effectual. The water deposits its sediment in about twenty-four hours, if the weather is calm, and of course at the end of this time, has done all that it can do in that way. The better plan is to change the water every day or two, and this can be done without difficulty. If the door is hoisted entirely up, much of the deposit will be washed out by the rush of water, but if it be raised two or three holes, it will be sufficiently high to dry the field in three tides, unless the squares are disproportioned to the trunk. The holes in the uprights of the trunk door to which I allude, are usually two or three inches apart, and we are often compelled when the land is very light or in very high tilth, to flow our crops in this slow and deliberate manner. If we mean to derive all the advantages from this flowing, which can be obtained, the process should be continued during the whole winter. To this plan it has been (and very fairly too) objected that the cross banks and river banks are very much washed and injured, that high places cannot be levelled, nor new ditches cut, nor old ones cleaned during its continuance. The only reply I can make to this is, that from the middle of February, when



we usually dry the land, to the last of March, there is abundant time, to accomplish all the work necessary to be done, preparatory to putting the seed into the ground.

I have now, Mr. Editor, endeavoured to answer the six first questions put by your correspondent, "*An Observer*," and intended to proceed, but my remarks have been extended to much greater length than was anticipated, and I will, in your next number (unless anticipated by some other correspondent) proceed to answer the remaining queries.

I am, Mr. Editor, your well wisher.

Q. E. D.

---

ART. LXXXVI.—*On the advantages of sowing Oats for pasturing Hogs, and making Hay in the Southern States; by A HIGHLANDER.*

"Sparta, (Geo.) May 10, 1832.

*Mr. Editor*,—Unwilling to make entire default, in the humble part, you may suppose I ought to take in original contributions to the *Agriculturist*, I offer the following—being chiefly *excerpta* from the opinions and practices of others, for really I deem it safer to rely on facts furnished by the experience of older and more observant planters, than any thing my own has verified. But, on the subject of this communication, I have enough of experience to justify the faith I have in the revelations of others—and without some such test of truth, no faith can be of much value.

If the question were put, "in what particulars are Southern Agriculturists, most deficient?" I think the universal answer of all discerning men, would be—first, in a want of skill in maintaining the fertility of their fields—and, secondly, in providing sufficient food for the live stock of the estate. In regard to the food and clothing of negroes in the upper country of Georgia, where I have the best acquaintance, I do not think that much need be added; and

I have reason to believe that from the gulf of Mexico to the Potomac, negro slaves are far better supplied with the necessities of life, than the "labouring classes," as they are called, in most other parts of the civilized world. Yes, Sir, a plantation negro in the upper country of Georgia or Carolina consumes more good sound bread, bacon and beef in one year than falls to the lot of a transatlantic labourer in three years; perhaps a lifetime. How it fares among our Eastern brethren, with their spinning jennies, dye tubs and onion patches, is to me rather a matter of conjecture than proof. For, although, I have frequently been among them, I had not the means of ascertaining much on this subject. If, however, Malthus is right in supposing that the longevity and increase of the human race are essentially dependent on adequate supplies of wholesome food; the census of 1830, gives no flattering evidence in favour of the subsistence arrangements of our non-slave holding States. The population of Georgia, it seems, has increased, at a rate far beyond that of the Northern and Eastern sections of the Union, and exhibits an average of longevity still more decisive of the superior climate of the country and moral habits of the people. But to the preservation of our soil.

If it be true that our plantations are, and have been long on the decline, because of the annual waste and dissipation of the soil, it is obvious that the barbarous systems in which this ruin originates, must be abandoned, or one of the most bounteously favoured countries in North-America must cease to be the habitation of man. Such an anticipation, however, would be irrational—sooner or later the husbandry of the South will improve—it has already improved, and by a judicious employment of the means within our power, evidences of this improvement will be made to appear in every part of the slave-holding country.

A practice is gaining ground in my neighbourhood, which I think deserves particular commendation, as a very cheap means of increasing the fertility of fields, and at the same time, providing much valuable food for the hog stock of our plantations. It was mentioned by Capt. Hillhouse, in a communication, published last year, in your useful journal; and consists of nothing more than sowing down fields in oats, to be pastured or eaten off by hogs. If, indeed, the planters had time, when the crop had just matured, or a

little before, to plough the whole of it in, the advantage to the soil is known to be much greater; but he is generally quite too much engaged with the culture of his corn and cotton crops at that season of the year to fallow extensively.

Early in January, for that is the best time, (the fall crops being four years out of five destroyed by frosts) several of my neighbours sow from one to two hundred acres in oats, a part of which is reserved for seed, and for feeding horses; the residue, when the crop begins to ripen, is given to the hogs. The whole stock is turned into the fields and permitted to eat and destroy without stint. One hundred acres, it is said, will keep between one and two hundred head of hogs in fine order three months, with very little or no additional food; whilst the soil, especially if well ploughed early the ensuing fall, is found to be essentially benefited by the practice.\* This mode of treating exhausted fields, is an excellent preparation for a cotton crop, and is doubtless the cheapest manuring process known to the country. The oat is very generally admitted to be an exhausting crop when compared with wheat or rye; but when the whole, except the grain, which is eaten, is permitted to remain on the field in the manner here described, the effects are proven to be beneficial, even without ploughing in at the fall, as should be done if practicable. Oat seed is cheap, and the most slovenly work in planting, seems to answer as good a purpose as neater husbandry. The plant is what they call a gross feeder, I infer, from having seen some of the best crops from seed sown on unbroken surfaces, overlaid with dry grass, weeds and other trash, and covered with the meanest kind of ploughing.

In supplying necessary winter forage for horses, mules, oxen, and cows, crab or crop grass hay (is the true spelling crop or crab?) has been latterly made among us in unusual quantities; though far less I am inclined to think than is needed. In all the Atlantic States, from Pennsylvania south, their animals are badly fed, the races degenerate, and as property, are scarcely worth half what they would be,

\* On the seaboard, the oats might be eaten off in time to sow the same field in cow peas, and if these were ploughed in, in the fall of the year, the fertility of the field would be greatly increased. In North-Carolina, the hogs are turned into these fields, and permitted to eat the pods, &c.—the residue is turned under. Great benefit is said to be derived from this practice.



if well kept. The excuse is, that the country is unproductive of grass, that hay cannot be made, and so there is no cure for an unavoidable evil. In this, there is not one word of truth. Every planter in Virginia, the Carolinas and Georgia, who works twenty hands, may in a few days, at the proper season, make and secure for his winter feeding, forty or fifty tons of as good hay as ever was sold in the market of Philadelphia. Though we have not the Northern clover, we have, it is believed, a greater and better variety of grasses than grow in the Northern States.

One culpable neglect of this branch of husbandry is the true cause of the degenerate and shabby condition in which our horses and cattle are usually found—induced, no doubt, by the example of the primitive settlers, whose cattle in those early days were enabled to subsist through the winter on the spontaneous productions of an extensive range. If one half the time and labour was given to hay making and housing in the South, that is found to be indispensable in New-England, our cattle might be kept fat all the winter, and in three fold numbers. I made crab-grass hay last year for the first time, and am determined to make double as much this year. On a forty acre field, on which a crop of wheat now grows, and which I took care at the time of sowing, to have smoothed down with a heavy harrow, I expect to cut next August or September, many thousand weight of excellent grass. This, every planter, who sows wheat or rye on pretty good soil, can do every year; and, I am persuaded, that all who try it will be surprised at the quantity of good forage which can be made with a few days labour.

Thus, Sir, you have my views of the uses which may be made of the oat and the crab-grass. They both abound in this country; and I feel great confidence in the opinion, that the first can be employed as a very cheap and efficacious preparation for the cotton crop, and that the latter will be found no less valuable in retrieving our cattle from the pitiable, “skin and bone” condition in which they are usually found in the month of March.

A HIGHLANDER.

---

ART. LXXXVIII.—*Account of the growth of Several Plants, the seeds of which were received from the South of France; by Dr. CHARLES W. CAPERS.*

"St. Helena, June 12, 1832.

*Dear Sir,*—I will, with much cheerfulness, comply with your request, in giving you an account of the planting of some seeds I received from the South of France. It will be recollected that they are from a climate somewhat corresponding to our own. I will first enumerate the seeds and then give you the result; remarking, however, that I received them too late to make a fair trial. Vetch, Sainfoin, Horse Cabbage, Field Beet, two kinds of Beans, two kinds of Potatoes, and Mulberry seeds.

*Vetch.*—The seeds were much larger than those produced from any kind which grow with us; which I may add upon our sea-coast, grows abundantly and most luxuriantly. It was planted, as all of them were, on the first of April, and is now about three feet high, and going to seed. Planted earlier, I have no question but that it would afford an excellent resource for early provender for cattle. I have never cut any of it, being desirous of saving as many seed as I could. The leaves and stalks of this Vetch are much larger and thicker than any we have growing with us, and may be cut until May, when it should be allowed to run up to seed.

*Sainfoin.*—This perished soon after coming up, whether owing to the lateness of the planting, or from what cause I know not.

*Horse Cabbage.*—This is the same as we know under the name of cow-cabbage. I planted the seed in drills, four feet apart, and at a proper time transplanted. The whole are growing very finely. So much has been written upon this cabbage, that it is unnecessary to say more, excepting that it was a desideratum to know whether they would stand our summer's sun. I planted the seeds in April, and transplanted in May, with the loss of but very few plants. Notwithstanding the continued drought we have had, they are in a very flourishing condition, I believe, calculated to withstand the "summer's heat," if not the "winter's cold;" of the latter, I have not had any experience.

*Field Beet.*—This appears to be the mangel wurtzel, which some years ago attracted so much attention in Europe. Dr. Letsom wrote in favour of them, recommending their cultivation as food for the poor. It was, also, highly recommended as fodder for cattle, and its leaves to be used as a substitute for spinach. I can only speak of it as very rapid in its growth, and an excellent vegetable for the table. It differs from our common beet in not having any tap-root, the growth being above the ground, in consequence of which you have to hill up to it. They grow to a very large size, and yet, are neither stringy or pithy. In France, the *Bête rave Champêtre*, as it is there called, grows to an enormous size, thirty or forty pounds in weight. Its leaves can be plucked every fortnight, and given as food to cattle.

*Beans.*—The white and yellow bean. These are bush beans, and may be used as string beans when green, and when dry can also be eaten, if well soaked before boiling.

*Potatoes.*—From planting these potatoes late, I have been so unsuccessful, that I shall say nothing about them; but I have always remarked that European potatoes planted with us, never do as well as those we get from the North, although the latter, as a vegetable, is not to be compared to a good Lancashire, or Irish potatoe. In the present case, it is probable, that the failure arose from late planting. Had this succeeded, I think it would have been impossible to have kept the seed for another year.

*Mulberry.*—I am sorry to say, that not one of those seeds came up; but I regret the circumstance the less, as I believe we have mulberries enough growing with us to furnish food for all the silkworms we can ever raise. I only regret that I have not an opportunity of comparing the product of the seed sent with our own, to see if there was any difference, as we are told that the quality of the silk depends very much upon the food on which the worms are fed. I am informed by a gentleman who has lately returned from the South of France and Italy, that the mulberry trees there are cut down close to the ground; and the young shoots in the spring broken off and the leaves stripped by the hand. In this manner the leaves are not only more easily obtained, but it is probable that they are more tender and better adapted for food. Among these seeds were a few grains of



oats and of wheat. The former appeared to be the Egyptian oats well known in this country; but the wheat, I think, will prove valuable, inasmuch, as two crops in the year can be raised from it. Notwithstanding, it was planted so late, it is now nearly ripe. It does not grow over three feet in height, and produces as well as any wheat I ever saw at the North or elsewhere.

I only planted a part of the seeds sent to me, reserving the remainder for a trial in the fall of the year. Should this communication be of any service, I will, in due time, inform you of the result of my future experiments.

Your most obedient servant.

CHARLES W. CAPERS.

P. S.—I have had an opportunity of examining the wild oats in flower, and find it to be as you describe, the *Elymus Virginicus* of Mr. Elliott. We have it growing with us to the height of three or four feet, in low rich ground; but I observed that the tops, if eaten, when the plant is in blossom, proves a very severe purgative to horses, and ought, on this account, to be guarded against.\*

\* If cut at that period and made into hay, it does not produce the effect our correspondent ascribes to it, and we can assure our readers, that the hay is much relished by horses. We have for several years past made a small quantity into hay, and found our horses eat it with considerable avidity.

*Ed. So. Agr.*

ART. LXXXIX.—*On the Gathering and Preserving of Potatoes*; by AN EXOTIC.

The season for gathering a crop of potatoes is fast approaching, and I take the liberty of reminding my Southern neighbours of the importance of guarding against the two great causes of decay—cold and moisture. To avoid these, I suggest the following hints, and although it may be a tale twice told,\* nevertheless, it does not frequently happen that we are too often advised of what is good.

Dig your potatoes before a frost, in dry weather; bruise them as little as possible; make the cellar of seasoned puncheons; cover them well with corn stalks and pine-trash, and then heavily with dirt; carefully bracing the inside so as to sustain this exterior weight. Continued and gentle smoke, which must be commenced in the cellar a week or so previous to gathering the crop must be kept up; suffer the top of the cellar to remain open about a fortnight, or until the crop has sufficiently steamed, securing the opening against rain, dew and frosts, by a ridge-board a little elevated with cross pieces.

The most economical plan in taking in potatoes is to strip off the vines with the hoe, then with the plough, and a yoke of oxen list down one side of the bed, then the other, and finally, run the plough through the centre; a sufficient number of hands must follow each of these three operations to search out the potatoes as fast as the earth is removed by the plough, and to remove the vines from obstructing the plough. This instrument has the advantage over the hoe in the following way—it performs the work as fast and faster than the hands can gather—it cuts no potatoes, and bruises none—it leaves none in the ground, and above all, is little or no bodily labour to any thing but the animal which drags the plough.

AN EXOTIC.

---

\* See p. 578, vol. iv. and p. 241, vol. v.

## PART II.

### SELECTIONS.

---

#### ART. LXVI.—*The Dairy.*

[FROM THE LIBRARY OF AGRICULTURAL AND HORTICULTURAL KNOWLEDGE.]

(Concluded from page 545.)

According to the above details, excellent cheese may be made, and although the general management in all cases is very similar, yet the difference of pasturage and slight modifications in making up the respective meals constitute the well known varieties which are held in repute by all classes of society. Of these we shall briefly notice the most popular, pointing out such details, as, by attention, will enable our reader to produce almost perfect imitations of those varieties most in consonance with their wishes.

1. Gloucester Cheese.—There are two kinds in the market, single and double Gloucester; the latter made from the milk and cream, the former with milk deprived of about half the cream. The single Gloucester is the less valuable, and to distinguish it from the double it is usually marked with the impression of a heart.

The following receipt for making cheese in imitation of double Gloucester, obtained from James Bell, Esq. of Woodhouselees, the first premium from the Highland Society of Scotland:

“It is material to have good rennet made from calves’ stomachs, properly cured, for curdling the milk.

“The milk immediately from the cows must be put through a strainer into a tub sufficiently large to hold the quantity of milk required for the cheese intended to be made.

“Put first into the milk a quantity of the finest cake annatto, which is manufactured in London for the purpose of colouring cheese. This is done by tying it in a piece of thin muslin and immersing it in the milk, shaking it till the milk is tinged to the colour you wish your cheese to be.

“Pour into the milk a sufficient quantity of rennet to coagulate or curdle it, but not more, and allow it to stand till the curd is quite formed, when it may be cut or broke with a knife, and the whey taken out with a skimming dish. The curd must be made firmer by degrees, taking out the whey by pressing it with



the hands into one side of the tub. This operation is laborious exercise for two stout dairy-maids.

"After this operation, the curd is cut into pieces of about an inch square, and put into a cloth; then put into a large wooden drainer. A weight (about half a hundred) must be then laid on the top of the cover, which presses the curd moderately.

"After remaining fifteen or twenty minutes, take the curd out, and cut it again into similar pieces, or rather smaller, putting it again into the drainer, and pressing it as before; take it out again in about twenty minutes, repeating the same process as before. Take it out of the drainer, and put it into a tub or vessel, and cut it as small as bird's meat, with a knife made for the purpose, having three blades, which facilitates the operation.

"The curd is then salted with the best salt, and well mixed, as much as is considered necessary. It is then put into a cloth of thin gauze made for the purpose, and put into a chessil or cheese-mould, and then into the press, taking it out from time to time, and giving dry cloths, till by the pressing the cloths come off quite dry, which is the rule for knowing when it is enough pressed; but it is, perhaps, an advantage to have so many presses as to allow the cheese to remain two days or upwards. If the last cloth is of a finer texture, and dipped in warm water, wringing it before putting it on the cheese, will give it a finer skin.

"It has been omitted to state, that while the curd is pressing in the drainer, it ought to be set before a good fire; and also, after putting it into the chessil, it ought to be placed there for twelve or fifteen hours, with about half a hundred weight on it, previous to putting it into the cheese press.

"The cheese, after being taken out of the press, should be laid on a tolerably dry floor, or shelves, (the former perhaps preferable,) so as not to dry them hastily. They ought, in the first instance, to be turned daily, and rubbed with a dry cloth. After becoming firm, their being turned and wiped twice a week will be sufficient. It is of great use to keep flies from coming near the cheese and breeding maggots, to rub the floors or shelves with elder or bourtrees leaves.

"The quantity of annatto used was one cake of about one-quarter of a pound weight, to ten cheeses, from twenty to twenty-two pounds each, and the quantity of salt about eight or nine ounces.

"One hundred quarts of milk are found to make cheese of thirty pounds, or about three quarts to one pound of cheese."

2. *Wiltshire Cheese*.—It would appear that shape and size constitute the only difference between Gloucester and North Wiltshire cheese. The following process, by Mr. Nichol, Easter-House, Lanarkshire, obtained the premium of the Highland Society of Scotland, and is well worthy the attention of the reader:

"We collect two meals to one making; the evening's collection is run through a fine searce into the milk vessels, and kept over night; the cream is taken off in the morning, and the milk heated to the degree proper for warming the whole mass, which, with the cream and new milk, is run through the searce into the milk-sye, (placed on a form,) and the proper quantity of colouring\* rennet added, (about a table spoonful of the latter to fifty Scotch pints, when good, is sufficient. The mass is then stirred about and well mixed, after which it is covered up, and let stand till coagulated. The dairy-maid introduces her hand into the mass, and stirs it about slowly, till it is all broken, pretty small. After standing about fifteen minutes, the edge of the tub is lifted up, and the whey run off slowly over the lip into a vessel placed below. The tub is then let down to stand a little, after which it is turned one-fourth round, and another collection emptied off. Thus, by turning the vessel a fourth round every time it is let down on the form, the curd is placed in a different position, in order to make it part with the whey more quickly.

"The process is continued till the curd has got a pretty firm consistence; it is then cut a little with a table knife, and what little whey it then parts with emptied off, and the curd lifted into the drainer.

"This method, I find, makes the whey come off quickly, and more pure than any other mode I have seen practised. We never touch it with the hand to press out the whey, as I find the least violence is apt to make it come off white, and so weaken the quality of the cheese.

"Being now in the drainer, (a square vessel, with small holes in the bottom, with a lid to go within it) the lid is put on it, and a cloth thrown over it, after which it is allowed to stand twenty minutes. A fourth hundred weight is then laid on, to lie twenty minutes more. It is then cut into pieces, of two inches square, with a table knife, the lid put on, and one half hundred weight laid on it, to lie half an hour. This process of cutting it smaller every half hour, and adding more weight till there be a hundred weight of pressure on it, is continued for four hours after the first cutting in the drainer, when it will be ready for the chessil (cheese-mould.)

"It is then put into a vessel kept for the purpose, with the proper quantity of good salt, and cut with the curd knife very small. A clean cheese cloth, rinsed through warm water and wrung out, is then laid on the chessil, and the curd put into it, and a half hundred weight laid on it for an hour. It is then put into the press, (constructed so as to hold four chessils, and the pressure augmented at pleasure,) with a pressure of two hundred

\* The colouring to be rubbed in a bowl, with a little warm water, and allowed to stand a little, and then poured off, as even the best is found to contain sand and sediment.

weight, where it stands three half-hours. It is then taken out, and another cloth wrung through warm water, laid on the chessil, and the cheese turned upside down into it, and introduced into the press, with a little more weight applied, to stand all night. Next morning and ever after, it is changed four times a day with clean dry cloths, till it is properly pressed (which will take at least three days,) the weight being always augmented till the pressure be at least a ton weight. A fine round cloth, the size of the chessil bottom, is laid in it, and the cheese put into it, and set into the press for an hour and a half, in order to give it the proper shape.

"After the cheese is taken from the press, it is rubbed with salt, and turned every day for a week or ten days; after which it is rubbed with a dry cloth and turned daily for a month longer, in order to keep it from moulding; after which every other day will be sufficient. The cheese-room ought to be in rather a cool exposure, and I find it sometimes necessary to cover the new cheeses with a cloth, in order to keep them from cracking.

"As I am anxious to give every information in my power, I have taken a note of the temperatures at each making, immediately after mixing the rennet into it, from the 16th of July to the end of August, and have sent the degree of heat at which each cheese in the sample sent for competition was made."

Date of making.	Number.	Description.	Heat of milk immediately after mixing in the rennet at 10 o'clock, A. M.	Temperature of the room at 2 o'clock P. M.
1825.			Degrees.	Degrees.
July 16	1	Imitation Wiltshire	95	74
16	1	— Gloucester	95	74
18	2	— Gloucester	96	65½
20	2	— Wiltshire	91½	70
20	4	— Gloucester	91½	70
20	3	Imitation Wiltshire, all new milk.	94	} Saturday Evening 8 o'clock.
22	4	Imitation Wiltshire	92	
22	5	— Gloucester	92	70
25	5	— Wiltshire	93	66
25	7	— Gloucester	93	66
26	6	— Wiltshire	92	67
28	8	— Gloucester	97	67
Aug. 6	10	— Wiltshire	97	} Made at 8 o'clock Evening.
8	11	— Wiltshire	94½	
				60

According to Mr. Sanderson, the pine-shaped cheeses made in imitation of North Wiltshire, are put into a cloth; made in the shape of a filtering bag, when the curd is quite green, and hung with the point down for twenty-four hours. They are then put



into a net with a cloth over it, and again suspended the reverse way.

**Cheddar Cheese**—Derives its name from a vale in Somersetshire, where it is exclusively made. The cheese is of a spongy appearance, and the eyes are filled with a limpid rich oil; they usually weigh about thirty pounds each.

4. **Cheshire Cheese**—Is made from the whole of the milk and cream; the morning's milk being mixed with that of the preceding evening, previously warmed. The usual weight is about sixty pounds each.

5. **Sage Cheese**—Is made by steeping one night, in a proper quantity of milk, two parts of sage, one part of marigold leaves, and a little parsley, after they have been bruised. On the following morning the *greened* milk is strained off, and mixed with about one-third of the whole quantity intended to be run or coagulated. The green and white milks are run separately, the two curds being kept apart until they be ready for vatting; these may be mixed either evenly and intimately, or irregularly and fancifully, according to the pleasure of the manufacturer. The management is the same as for common cheese. Green cheese are made in the vale of Gloucester, as also in Wiltshire.

6. **Stilton**—May be made by the following simple process:—To the new milk of the cheese-making morning add the cream from that of the preceding evening, together with the rennet, watching the full separation of the curd, which must be removed from the whey without breaking, and placed into a seive, until of such consistence as to bear being lifted up and placed in a hoop that will receive it without much pressure. The cheese, as it dries, will shrink up, and must, therefore, be placed from time to time in a tighter hoop, and turned daily, until it acquires the proper degree of consistence for use or keeping.

---

ART. LXVII.—*On the General Management of the Horse.*

[FROM THE LIBRARY OF USEFUL KNOWLEDGE.]

(Continued from page 548.)

**Grooming.**—Of this much need not be said, since custom, and, apparently without ill effect, has allotted so little of the comb and brush to the farmer's horse. The animal that is worked all day, and turned out at night, requires little more to be done to

him than to have the dirt brushed off his limbs. Regular grooming, by rendering his skin more sensible to the alteration of temperature, and the inclemency of the weather, would be prejudicial. The horse that is altogether turned out needs no grooming. The dandriff or scurf which accumulates at the roots of the hair is a provision of nature to defend him from the wind and the cold.

It is to the stabled horse, highly fed, and little or irregularly worked, that grooming is of so much importance. Good rubbing with the brush or the currycomb *opens the pores of the skin*, and circulates the blood to the extremities of the body and through the minute vessels of the skin, and produces free and healthy perspiration, and stands in the room of exercise. No horse will carry a fine coat without either heat or dressing. They both effect the same purpose; they both increase the insensible perspiration: but the first does it at the expense of health and strength, while the second, at the same time that it produces a glow on the skin, and a determination of blood to it, rouses all the energies of the frame. It would be well for the proprietor of the horse if he were to insist upon it, and to see that his orders are really obeyed, that the fine coat in which he and his groom so much delight, is produced by honest rubbing, and not by a heated stable and thick clothing, and most of all, not by stimulating or injurious spices.

When the weather will permit the horse to be taken out, he should never be groomed in the stable. Without dwelling on the want of cleanliness, when the scurf and dust that are brushed from the horse lodge in his manger, and mingle with his food, experience teaches, that if the cold is not too great, the animal is braced and invigorated from being dressed in the open air, to a degree that cannot be attained in the stable. There is no necessity, however, for half the punishment which many a groom inflicts upon the horse in the act of dressing; and particularly on one whose skin is thin and sensible. The currycomb should at all times be lightly applied. With many horses its use may be almost dispensed with; and even the brush need not be so hard, nor the points of the bristles so irregular as they often are. A soft brush, with a little more weight of the hand, will be equally effectual, and a great deal more pleasant to the horse. A hair cloth, while it will seldom irritate and tease, will be almost sufficient with horses that have thin hair, and that have not been neglected.

Whoever would be convinced of the benefit of friction to the horse's skin, and to the horse generally, need only observe the effect produced by well hand-rubbing the legs of a tired horse. While every enlargement subsides, and the painful stiffness disappears, and the legs attain their natural warmth, and become

fine, the animal is evidently and rapidly reviving; he attacks his food with appetite, and then quietly lies down to rest.

*Exercise.*—Our observations on this important branch of stable management must have only slight reference to the agricultural horse. His work is usually regular and not exhausting. He is neither predisposed to disease by idleness, nor worn out by excessive exertion. He, like his master, has enough to do to keep him in health, and not enough to distress or injure him: on the contrary, the regularity of his work prolongs life to an extent rarely witnessed in the stable of the gentleman. Our remarks on exercise, then, must have a general bearing, or have principal reference to those persons who are in the middle stations of life, who contrive to keep a horse for business or pleasure, but cannot afford to maintain a servant for the express purpose of looking after it. The first rule we would lay down is, that every horse should have daily exercise. The horse that, with the usual stable feeding, stands idle for three or four days, as is the case in many establishments, must suffer. He is disposed to fever, or to grease, or, most of all, to diseases of the foot; and if, after these three or four days of inactivity, he is ridden fast and far, is almost sure to have inflammation of the lungs or of the feet.

A gentleman or tradesman's horse suffers a great deal more from idleness than he does from work. A stable-fed horse should have two hours' exercise every day, if he is to be kept free from disease. Nothing of extraordinary or even of ordinary labour can be effected on the road or in the field without sufficient and regular exercise. It is this alone which can give energy to the system, or develop the powers of any animal.

How then is this exercise to be given? As much as possible by, or under the superintendence of the owner. The exercise given by the groom is rarely to be depended upon. It is inefficient, or it is extreme. It is in many cases both irregular and injurious. It is dependent on the caprice of him who is performing a task, and who will render that task subservient to his own pleasure or purposes.

In training the hunter and the race-horse regular exercise is the most important of all considerations, however it may be forgotten in the unusual management of the stable. The exercised horse will discharge his task, and sometimes a severe one, with ease and pleasure, while the idle and neglected one will be fatigued ere half his labour be accomplished, and if he be pushed a little too far, dangerous inflammation will ensue. How often, nevertheless, does it happen, that the horse that has stood inactive in the stable three or four days, is ridden or driven thirty or forty miles in the course of a single day? This rest is often purposely given to prepare for extra-exertion; to lay in a stock of strength for the performance of the task required of him: and then the owner is surprised and dissatisfied if the animal is fairly



knocked up, or possibly becomes seriously ill. Nothing is so common and so preposterous, as for a person to buy a horse from a dealer's stable, where he has been idly fattening for sale for many a day, and immediately to give him a long run after the hounds, and complain bitterly, and think that he has been imposed upon, if the animal is exhausted before the end of the chase, or is compelled to be led home suffering from violent inflammation. Regular and gradually increasing exercise would have made the same horse appear a treasure to his owner.

Exercise should be somewhat proportioned to the age of the horse. A young horse requires more than an old one. Nature has given to young animals of every kind a disposition to activity; but the exercise must not be violent. A great deal depends upon the manner in which it is given. To preserve the temper, and to promote health, it should be moderate, at least at the beginning and the termination. The rapid trot, or even the gallop, may be resorted to in the middle of the exercise, but the horse must be brought in cool. If the owner would seldom intrust his horse to boys, and would insist on the exercise being taken within sight, or in the neighbourhood of his residence, many an accident and irreparable injury would be avoided. It should be the owner's pleasure, and is his interest, personally to attend to all these things. He manages every other part of his concerns, and he may depend on it, that he suffers when he neglects, or is in a manner excluded from his stables.

(*To be continued.*)

---

ART. LXVIII.—*Bee-Moth.*

The best method of destroying the Bee-Moth, or of preventing its ravages among Bees; by James Thatcher.

[FROM THE MASS. AGRICULTURAL REPOSITORY AND JOURNAL.]

"Plymouth, October 30, 1831.

The whole tribe of flies and moths propagate their species by eggs, which the females deposit in situations and substances in which its offspring caterpillar may find its appropriate food, the moment it is disclosed. The female moth is endowed by the all-wise Author of its existence, with a most wonderful sagacity and skill, in anticipating the wants of the young grubs, when they escape from the eggs and have no mother to direct or provide for them. The numerous species of moths and butterflies seldom

live more than a few days after depositing their eggs for a future progeny. The period at which the eggs are hatched after deposition, depends much on the temperature of the atmosphere; by exposure to the cold of an ice-house in summer, the hatching may be retarded, as it may be hastened by a heated atmosphere in winter or spring. In general, the eggs of moths remain locked up during winter, in the secure spot with the mother insect had selected, and are hatched into grubs or worms by the genial heat of spring.

The silkworm moth, when unrestrained in its natural habits, deposits its eggs on the leaves of trees, and carefully glues them to the leaves, that they may not be shaken off by the wind or washed away by rains; and the larvæ, as soon as disclosed, finds its nutriment in the leaf by which it is sustained. The moth that produces the caterpillar (*Phalæna neustria*) and that which produces the canker-worm (*Phalæna vernata peckii*), attach their eggs to the branches of fruit trees, that the ensuing vernal heat may bring the young brood into existence, where they find their food in the buds, and leaves just expanding. The moth from which comes the worm called the borer, and the insect from which proceeds the peach tree worm, deposit their eggs on the bark of trees, that the larvæ may penetrate into its substance for support. The mischievous curculio stings the young fruit and deposits its eggs, where the young maggot will find its nutriment, and at the same time its vehicle to convey it to the earth for a more permanent residence. The diminutive moth whose progeny preys upon woollen cloth, selects that article as a nidus for her eggs. To these instances numerous others might be added.

The true bee-moth, according to Dr. M. Harris, the *Phalæna tinæ cereæna* of Linnaeus, is a native of Europe, but has been introduced and naturalized in our country. This insect makes its appearance in April, or May, according to the warmth of the season, and continues its depredations among bees till October. It appears in the form of a small miller or nocturnal butterfly, the same that we see fluttering about our lights in a summer's evening. It is smaller than a bee, of a greyish colour, paler towards the head, glossy brown or purplish near the outer margin of the wings. They have four wings, but seldom soar high in the air; they are frequently seen attached to some substance, apparently motionless, but on the approach of danger they instantly leap off with great rapidity.

These pernicious insects discover a peculiar disposition to molest bees, and propagate their species in bee-hives. They lie concealed in the grass during the day, and effect their mischievous purpose in the night, when, by the aid of a light, they may be seen in great numbers, hovering about the apiary, to which they are allured by the sweet odor from the hive. The female moth makes every effort to deposit her eggs within the hive, but failing

to find admittance, she lays them about the lower edges and crevices, as near the entrance as she can; and it sometimes happens, probably, that they are carried into the hive by the legs of the bees. The eggs are, according to the course of nature, hatched into caterpillars or worms, having sixteen feet and a reddish head; these creatures soon wend their way into the hive; and not unfrequently they have been known, with their strong jaws, to cut a channel of their own size through the substance of an inch board, to obtain admittance. These worms, when arrived at maturity, construct an oblong oval pod or cocoon, in which they envelope themselves. In this situation they continue to enlarge and extend their covering, leaving an opening for the head; and while in their armour, thus formed, they are perfectly secure from any annoyance from the bees. They feed on the wax and comb, devouring and gnawing down the cells which contain the eggs and the young bees, until they are wholly destroyed. At length the caterpillars are changed into a chrysalis state, their bodies are contracted within their cocoon, they cease to feed, and in due time are transformed into a winged insect, the true bee-moth. Here the insects continue to increase in number, till the whole order and economy of the domicile is interrupted; and the bees being overpowered, either die, or in despair quit their hive to the enemy, the first or second year of their attack.

The moths disclosed from the cocoons, seek an exit from the hive, when they couple; and the females, having deposited their eggs in a suitable nidus, soon perish, leaving in the hive in autumn, a numerous progeny to be transformed into their perfect state in the ensuing spring. The moths thus transformed, pursue the same train of actions to propagate the species, which had been pursued by the parent insects of the preceding year; and it is not improbable, that two or more generations are reared in succession, the same season. These destructive insects are more prevalent in some local situations than in others; in some places the stock of bees is entirely annihilated, and all attempts to cultivate them are abandoned.

The female moth is remarkably fertile, laying 400 or 500 eggs in a season. The precise time when the female deposits her eggs, and the time required for their hatching, has hitherto eluded my research; but I have known moths to appear early in April, and at one time have seen a worm thrust out of a hive by the bees in the month of March. The process, both of hatching and transformation, is promoted by the heat within the hive. There is always in the hive with the moths and grubs a quantity of web, resembling that of the spider, the use of which, as I conceive, is to entangle the eggs to prevent them from being spread abroad and lost, and to serve as a sort of cradle for the young grubs. About the middle of May, 1828, I perceived on the floor



board of a hive, a mass of web in which were numerous grubs, from the size of a needle's point to that of an half inch in length. When this web is observed in or about a hive, it may be certainly known that the hive is infested with insects. I inclosed a number of full-grown caterpillars in a box for experiment. They immediately spun their cocoons, in which they enveloped themselves, and in this chrysalis state they remained till July and August, when they made an aperture with their head, through which they escaped, and expanding their wings, launched into the air. Thus the disgusting caterpillar, which so lately crept on sixteen feet, now is seen to fly with the gracefulness and ease peculiar to the butterfly, one of the most elegant and active of the winged insects. Here we may recognize the Deity in his wonderful works!

In October, 1830, I took from a bee-hive which I purchased, about twenty cocoons containing chrysalis, put them into a box glazed on one side, and kept them in moderate temperature through the winter. In the months of July and August they were transformed into winged moths, a part of which were double the size of others, probably designative of the different sexes; but I am surprised to observe one among them a beautiful snow-white miller. I put a quantity of honey comb in the box, with hope of procuring a nursery, that I might be able to discover their habits and mode of propagation, but they survived but a few days.

*Methods by which the bee-moth may be destroyed.*—The extermination of this destructive species of insects is absolutely impracticable, by any means that art can devise; but their number may be considerably diminished in any local situation, and their ravages among apiaries may be entirely prevented. Bottles, with a little honey or syrup at the bottom, placed near the hive, will entrap multitudes. If open shallow vessels, containing a mixture of sweetened water, to a pint of which a gill of vinegar be added, are placed within their range, they will be enticed to sip the liquor, by which they will become intoxicated and drowned by hundreds. They should be burnt the next morning, lest by the heat of the sun and air they become resuscitated. If lights were placed near the hives, a still greater number would be allured to the traps, where they may be destroyed.

When these insects have got possession of a hive, they cannot by any means in our power be expelled; the only remedy consists in the removal of the bees into another hive. It would be preposterous to suppose that any article could be applied to the insect, while in the cocoon in the interior of the hive, that would effect its destruction. Common salt has been recommended, but I have enclosed the worms in a box, containing marine salt, and they have covered themselves with their web and remained there six months, when they were transformed into the miller. I put

them in a solution of alkaline salts, and even potash, and they have escaped with impunity.

Knowing, therefore, the inutility of all our means to effect the destruction of the bee-moth, it only remains to describe the most effectual expedient to prevent its ravages among our apiaries.

A proper understanding of the instinctive habits of the female moth for the propagation of her species, will indicate the most successive mode of procedure. It has already been observed, that the female selects an appropriate situation as a nidus for her eggs; she discovers a partiality for the floor of the bee-hive, anticipating the sweets of its contents for the dainty offspring. Secluded from the interior of the hive, she deposits her eggs about its edgess, and in crevices as near its entrance as possible, trusting to the instinctive faculty of her progeny to seek their way into the hive. From all my observations, I have not been able to discover that moths enter bee-hives by the common entrance. The bees have constantly stationed at their avenue a powerful and vigilant guard, and on the approach of a moth, a mutual alarm and commotion is observable, and the assailant is soon obliged to retreat. In locations, however, where moths are very numerous, they may out-general their opposers, and obtain an entrance. From the foregoing considerations it must appear obvious, that the only effectual method to secure the hives from the ravages of the great enemy to bees, consists in a close house to seclude them from all access. This unquestionably affords the only defence, and combines all the requisite advantages.

From three years experience, I can affirm that this plan has answered my full expectations, and I can rely upon it as a perfect security. I have no reason to suppose that my apiary is in the least infested with the insects. The form and dimensions of the house which I have found convenient, is in length proportioned to the number of hives which it is to contain; the width is about eighteen inches, and the height about two and a half feet, for a single tier of hives, with a roof sloping in front. The front part should be entirely closed, having apertures at proper distances to correspond with the mouths of the several hives to be placed within. The outlet from the hive and from the house, should be a little sloping downwards, that the bees may with greater facility remove obnoxious substances, and be better enabled to defend themselves against their enemies. The whole wall on the back part should consist of doors furnished with hinges and fastenings. The house is to be placed on posts about two and a half feet high, set into the ground and secured from being turned over by the wind. The doors may be shut or left open in the day, as circumstances may require, both winter and summer; and if thought necessary, a grating may be placed before the avenue at night. Instead of the house just described, the hives might be placed in an upper apartment in an out-house; and the

height from the ground would afford additional security against the moth. As a further precaution, it may be recommended to whitewash the front of the house, and the floor board, which should also be changed frequently.

---

ART. LXIX.—*On the Making and Managing of Hot-beds and Green-houses.*

[FROM COBBET'S ENGLISH GARDENER.]

(Continued from page 558.)

As to the making of green-houses, I shall think of nothing more than a place to preserve tender plants from the frost in the winter, and to have hardy flowers during a season of the year when there are no flowers abroad. It is necessary, in order to make a green-house an agreeable thing, that it should be very near to the dwelling-house. It is intended for the pleasure, for the rational amusement and occupation of persons who would otherwise be employed in things irrational; if not in things mischievous. To have it at a distance from the house would be to render it nearly useless; for, to take a pretty long tramp in the dirt or wet, or snow, to get at a sight of the plants, would be, nine times out of ten, not performed; and the pain would, in most instances, exceed the pleasure. A green-house should, therefore, be erected against the dwelling-house. The south side of the house would be best for the green-house; but any aspect, to the south of due east and due west may do tolerably well; and a door into it, and a window, or windows looking into it, from any room of the house, in which people frequently sit, makes the thing extremely beautiful and agreeable. It must be glass on the top, at the end most distant from the house, and in the front from about three feet high. There should be an outer door for the ingress and egress of the gardener, and a little flue running round for the purpose of obtaining heat sufficient for the keeping of a heat between forty and fifty degrees of Fahrenheit's thermometer. Stages, shelves, and other things necessary for arranging the plants upon, would be erected according to the taste of the owner, and the purposes in view. Besides the plants usually kept in green-houses, such as geraniums, heaths, and the like, I should choose to have bulbous-rooted plants of various sorts, even the most common, not excluding snow-drops and

crocuses. Primroses and violets (the common single sorts, for the others have no smell,) cowslips and daisies; some dwarf roses; and thus a very beautiful flower-garden would be to be seen in the month of February, or still more early. Green-house plants are always set out of doors in the summer, when they are generally very much eclipsed in beauty by plants of a hardy and more vigorous description. If there be no green-house, these plants are taken into the house, shut up in a small space, very frequently in the shade, and always from strong light, especially early in the morning; which greatly injures, and, sometimes, totally destroys them; besides, they really give no pleasure, except in winter; for, as was observed before, after the month of May comes, they are far surpassed in beauty by the shrubberies and the parterre.

Nor is such a place without its real use, for, few persons will deny that fruit is of use; none will deny that fine grapes are amongst the best of fruit; we all know that these are not to be had in England, in the general run of years, without the assistance of glass; and the green-house, in which the shade of the grapes would do no injury to the plants, because these would be out in the open air, except at the time when there would be little of leaf upon the vines, is as complete a thing for a grapery as if made for that sole purpose; for, if the heat of forty to fifty degrees would bring the vines to bear at a time, or, rather, to send out their leaves at a time inconvenient for the plants, you have nothing to do but to take the vine branches out of the house, and keep them there until such time that they might be put in again without their leaves producing an inconvenient shade over the plants, previous to the time of these latter being moved out into the open air.

As the green-house would have given you a beautiful flower-garden and shrubbery during the winter, making the part of the house to which it is attached the pleasantest place in the world, so, in summer, what can be imagined more beautiful than bunches of grapes hanging down, surrounded by elegant leaves, and proceeding on each grape from the size of a pin's head to the size of a plum? How the vines are to be planted, trained and pruned; and how the several plants suited to a green-house are to be propagated, reared and managed; will be spoken of under the heads of vines, and under those of the several plants and flowers; but I cannot conclude this chapter without observing, that it is the *moral* effects naturally attending a green-house, that I set the most value upon. I will not, with Lord Bacon, praise pursuits like these, because "God Almighty first planted a garden;" nor with Cowley, because "a Garden is like Heaven;" nor with Addison, because a "Garden was the habitation of our first parents before the fall;" all which is rather far-fetched, and



puts one in mind of the dispute between the gardeners and the tailors, as to the antiquity of their respective calling; the former contending that the planting of the garden took place before the sewing of the fig-leaves together; and the latter contending, that there was no gardening at all till Adam was expelled, and compelled to work; but, that the sewing was a real and *bonâ fide* act of tailoring. This, to be sure, is vulgar and grovelling work; but, who can blame such persons when they have Lord Bacon to furnish them with a precedent? I like, a great deal better than these writers, Sir William Temple, who, while he was a man of the soundest judgment, employed in some of the greatest concerns of his country, so ardently and yet so rationally and unaffectedly praises the pursuits of gardening, in which he delighted from his youth to his old age; and of his taste in which he gave such delightful proofs in those gardens and grounds at Moor Park in Surrey, beneath the turf of one spot of which he caused, by his will, his heart to be buried, and which spot, together with all the rest of the beautiful arrangement, has been torn about and disfigured within the last fifty years by a succession of wine-merchants, spirit-merchants, West-Indians, and God knows what besides: I like a great deal better the sentiments of this really wise and excellent man; but I look still further as to effects, There must be amusements in every family. Children observe and follow their parents in almost every thing. How much better, during a long and dreary winter, for daughters, and even sons, to assist, or attend, their mother, in a green-house, than to be seated with her at cards, or, in the blubberings over a stupid novel, or at any other amusement that can possibly be conceived! How much more innocent, more pleasant, more free from temptation to evil, this amusement, than any other! How much more instructive, too! "Bend the twig when young;" but, here, there needs no force; nay, not even persuasion. The thing is so pleasant in itself; it so naturally meets the wishes; that the taste is fixed at once, and it remains, to the exclusion of cards and dice, to the end of life. Indeed, gardening in general is favourable to the well-being of man. As the taste for it decreases in any country, vicious amusements and vicious habits are sure to increase. Towns are preferred to the country; and the time is spent in something or other that conduces to vice and misery. Gardening is a source of much greater profit than is generally imagined; but, merely as an amusement, or recreation, it is a thing of very great value: it is a pursuit not only compatible with, but favourable to, the study of any art or science: it is conducive to health, by means of the irresistible temptation which it offers to early rising; to the stirring abroad upon one's legs; for a man may really ride till he cannot walk, sit till he cannot stand, and lie abed till he cannot get up. It tends to turn the minds of youth from amusements and attachments of a

frivolous or vicious nature: it is a taste which is indulged at home: it tends to make home pleasant, and to endear us to the spot on which it is our lot to live: and, as to the *expenses*, compared with those of the short, the unsatisfactory, the injurious enjoyments of the card-table, and the rest of those amusements or pastimes which are sought for in the town?

---

ART. LXX.—*On the Cultivation of the Tulip.*

[FROM THE HORTICULTURAL REGISTER.]

*Gentlemen*,—As my article on the culture of the *Auricula*, seems to have met with your approbation, and found a place in the pages of your Magazine, I again lay before you a few remarks on the culture of the Tulip, which, if you think worth insertion, are entirely at your service.

I may perhaps be excused if I digress a little from the subject in question, and commence the present paper with a short account of the cultivation of that flower, from the time of its introduction into this country. It is considered to be a native of the Levant, and is very common in Syria and Persia, and according to Gesner, was brought to Europe in 1559, and was cultivated in England by James Garnett, as early as 1577. Towards the middle of the seventeenth century, it became an object of particular interest in the Netherlands—nay, to such a height had the passion for fine Tulips arrived in 1637, that a public auction, which took place at Alkmaar, in Holland, 120 Tulip-roots were sold for no less a sum than £7,875, and one sort alone, called the Viceroy, cost the purchaser £190. The taste for Tulips in England appears to have arrived at its climax about the end of the seventeenth and beginning of the eighteenth centuries, after which time the study of Botany began to gain ground, and in a few years had obtained the complete ascendancy. The Tulip, however, still continued to be cultivated to a great extent, both in Holland and England, by the amateur florists, and to this day, like the *Auricula* and some other flowers, it is held by them in great estimation, so much so, that a noted modern writer on these subjects, remarks, that a moderate collection of choice bulbs cannot be purchased for a sum much less than £1000 at the usual prices.

Tulips are divided by florists into three classes, viz: *Bybloemens*, such as have a white ground, variegated with purple, the edges well feathered, the leaflets of the perianth erect, and the whole forming a well shaped cup; as *Bienfait*, *Washington*, *Incomparable*, *Bagnet*, &c. 2nd. *Bizarres*, having a yellow ground, variegated with scarlet, purple, rose, or velvet, well feathered round the edge; as *Catafalque*, *Trafalgar Duc de Savoie*, &c. And 3rd. *Roses*, with white ground, variegated with rose-colour, scarlet, or crimson.

When it is wished to propagate for seed, for new varieties, the best method is to select such as have good strong stems, with well formed cups, and the most perfect flowers, such as *Trafalgar*, *Incomparable*, *Bienfait*, *Surpasse*, *Catafalque*, *Walworth*, &c. The plants thus selected for seed, should always be exposed to the weather, as shade will prevent the seed coming to proper perfection; it must be allowed to remain on the stems till the seed vessels open, then cut it off with about six inches of the stem, and lay it by to dry. The best time to sow these seeds is in October. Get some shallow pans or boxes, and fill them with light sandy loam, making an even surface to receive the seeds, which must be covered about half an inch deep with light soil mixed with about one-third of rotten horse-dung. They will not appear until about the middle of March, the following year; and as the tops will again be dead by the beginning of June, it is necessary for them to remain in the boxes, without being disturbed, for two years; as they are, in general, five or six years from the time of sowing, before they flower. After the second year, they will require taking up, and planting in good new soil, every season.

The situation of the beds for full grown flowering bulbs, should always be in an open, airy, part of the garden; the common soil must be taken out the full dimensions of the bed, to the depth of about eighteen inches, and the place filled up with good sandy loam, from an old pasture, (which should be dug at least four months before it is used) mixed with a small portion of well rotted two-year-old horse-dung. The bed must be raised three inches above the paths, at the outsides, and four inches, at least, in the middle of the bed; this convexity will render it more capable of casting off the water, when exposed at any time to heavy rain. The bed being thus formed, the next thing to proceed to, is planting; the best time for doing this, is the beginning of November—plant the bulbs about five inches from each other in the rows, and the same distance from row to row, being careful to put in each hole a little fine river sand, before you introduce the bulb; this will not only be of great service to the roots, but will also greatly prevent their being attacked by the grub and wire-worm. The depth they must be planted, is about four inches.

After being planted, they will require but little attention until the latter end of February, when most of them will appear above ground; they must then be carefully examined, and if either the leaves or bulbs are injured by the canker, the part affected must be carefully taken off, choosing a fine dry day for the purpose, and if the wounded part be left exposed to the sun and air, it will presently heal. When the flower-buds make their appearance, great care must be taken to shelter them from hail-storms, heavy rains, or frosts; this may be done, by round pieces of boards, about twelve inches diameter, having a stick passed through the centre of each board. These being stuck in the bed, by the side of the bulb, will form a cap over the top of the flower-bud, which can be raised higher at pleasure. This method, I have found far preferable to covering the bed with either hoops and mats, or awning, until the flowers are much more advanced; for I have proved by experience, that either of the latter means are apt to draw up the stems so weak, as to render them almost incapable of bearing the cups, and at the same time so weakening to the bulb, that it will be at least a year or two, before you are able to produce a good bloom again.

As soon as the colours of the flowers begin to show themselves, it is necessary to cover the bed with an awning, as their exposure to either sun or rain would cause the colours to run and mix, and by this means, spoil the beauty of the flowers; but as soon as the flowers begin to fall, the sheet must be again removed, and all seed-pods broken off, which will greatly strengthen the bulbs. They must be allowed to remain until the upper part of the stem becomes dry and withered, and the foliage wears a yellow hue; as soon as this is observed, commence taking them up. Lay them on boards under cover, in a dry, airy situation, and let them remain until the following season for planting.

I am, gentlemen, yours, &c.

JOHN REVELL.

*Pitsmoor, July 25th, 1831.*

---

ART. LXXI.—*On Dahlias.*

[FROM THE AMERICAN FARMER.]

We really wish our cottage garden was located nearer town, that the citizens generally might have an opportunity of seeing our splendid bloom of Dahlias. Those who have never seen this



flower, (and very few have ever been seen in Baltimore,) can form no idea of their splendour and magnificence. The flower is formed very much like a large *camelia japonica*; there are single, semidouble and double varieties; and all sizes, from a disk of two to six or seven inches diameter. Their colour comprises every shade, from purest white up to the deepest black crimson. We have about thirty varieties and about twenty of them constantly in bloom, affording a display altogether unequalled by any other garden plant. Besides this, we have succeeded in producing several splendid new varieties from seed, among which are two very superior semidouble black crimson. The colours of the dahlias are remarkable for their brilliancy and clearness—nothing dull of common-place in them.

The cultivation of Dahlias has been hitherto very unsuccessful in this city and neighbourhood; attributable, as we know from experience, to our following the directions of English gardeners, who direct us to put them in poor sandy soil. This may be necessary in England, where the climate is not so subject to excessive droughts as ours. We practised upon this plan for several years, and never obtained a flower worth looking at. This year we went to the opposite extreme; dug a deep trench, filled it with rich vegetable mould, stable manure, and good door yard scrapings, with a moiety of good garden mould, and planted them therein, giving them no further attention than keeping down the weeds. The consequence has been, the splendid bloom above described for two months past.

*Note.*—It is only within a year or two that the splendid *double* varieties of this plant have been introduced into our gardens. The single have long been among us; but, those who have not seen the double, can form but little idea of the splendid appearance of the latter. We know of no family of plants which more richly merits a place in every flower garden than the Dahlia. With us it commences blooming in April and May, and continues until the herbage is killed by a frost. The principal bloom is in September and October. The plant is perennial, and propagated by dividing the roots, and by shoots for preserving varieties, and by seeds for obtaining new kinds. In our next we will give some excellent directions for its culture, taken from some of the works in our possession. We understand that roots will be for sale this winter at the Seed Store of Mr. James Wilson, King-street, and we recommend those of our readers who wish a brilliant display, in autumn, in their gardens, to procure some of these roots.—*Ed. So. Agr.*

---

## ART. LXXII.—On the Culture of the Rose.

[FROM THE HORTICULTURAL REGISTER.]

*Gentlemen*,—Observing on the cover of your Magazine, an announcement of your intention to insert papers on the cultivation, &c. of all our chief “Fruits, Vegetables, and Flowers;” and as my remarks on changing the colour of the flowers of the *Hydrangea*, seems to have met with your approbation, I beg leave again to trouble you with a few more remarks on the culture of the Rose. This ornament and charm both of the palace and cottage, seems to have been a universal favourite for an unknown length of time, both throughout Europe and Asia. Along the plains of Syria, roses are formed in thick plantations, and form one of the means of subsistence to the natives, who convert the leaves and flowers into cakes, otto, and tarts, the latter of which, according to modern British travellers, are exceedingly delicious: it is not certain, however, what are the species there cultivated. Some persons must have informed me, or I have read, that in Damascus they collect the young tops of rose trees, and eat them as vegetables.

There seems to have been but few sorts cultivated till within the last forty years, since which time a great number of beautiful varieties have been raised from seed on the continent, chiefly in France; Britain, too, has produced upwards of three hundred new varieties, mostly from the *R. spinosissima*, or Scotch rose, thus swelling up the nursery catalogues to upwards of a thousand names; many of these, however, so nearly resemble each other, that it has occasioned many persons to doubt whether they are distinct varieties, or whether the trifling distinction which does exist merely arises from situation, soil, &c. However this may be, the distinction amongst many of the French roses is so trifling as scarcely to be discernable; and most judges have come to the conclusion that there does not exist more than about five hundred real distinct varieties.

The rose thrives best in a rich, strong, loomy soil, and is generally propagated by layers, when the true sorts are intended to be preserved. By cuttings, for such as the *Rosa Indica*, and its varieties, *R. Banksia*, *R. Noisette*, &c.; by suckers for the Provence or cabbage rose, and many other common sorts; and by budding or grafting, when standards are wanted, or a variety of coloured flowers on one bush.

*Laying*, is performed thus:—in the beginning of July, just when they are coming into flower, having provided yourself with a sharp knife, and a few hooked pegs, commence by taking hold of the shoot intended to be layered, and make an incision just below a bud, on the upper side of the branch, making your knife pass half way up to the next bud above; then give the branch a

slight twist, that the part so cut may rest upon the soil; stick in your peg, to hold it in its place, and cover it up with soil, to about the depth of two inches. The custom of layering without the incision, retards their striking roots so long, that very often they are not fit to take off from the stools until the spring following; whereas, if the incision be made, I have seldom found them more than two or three months at most, if the season be not very dry.

*Cuttings.*—There are very few, except the China rose, and its varieties, that appear to strike readily from cuttings. The method I pursue is this;—about the month of May I take a quantity of cuttings, and place them under a hand-glass, on a north aspect, in a composition of leaf mould and light loam. These are generally struck so as to be potted off in the autumn.

*Suckers.*—Most of the common sorts admit of being propagated by suckers, and division of the root. But if a variety of coloured flowers is wanted on one bush, or standards are required, it will be necessary to *bud*. These last are not only a great addition to the ornament of the garden, but M. Brouville, of Versailles, conceives the colours of the flowers are rendered more brilliant and durable. How far this idea may be correct, I am not prepared to say; this, however, I know, that the flowers appear to show themselves to greater advantage, and expose the brilliancy of their colours more to view, on a standard than on a dwarf. The common time for *budding*, is in July; they, however, will take very freely if the operation is performed in the spring, providing a small portion of wood be attached to the bud: for this purpose scions are cut, and stuck in the ground, until the bark of the stock will run. To wait for this, however, is not indispensibly necessary, in all cases, for many sorts will grow readily, if they are inserted in a niche exactly fitting the bud, tightly bound up with some soft bass mat. In both cases it will be necessary to prune away the stock, down to the branch in which the bud is inserted, and the branch itself shortened to two or three eyes; for although this will, in a great measure, retard the progress of circulation, and evidently stop the roots from making the progress it otherwise would do; it will, nevertheless, help the bud greatly, and will speedily cause it to throw out leaves. When a little branch is formed by the bud, nip off the end, in order to make it branch, and if care be taken of it, and the other buds on the tree kept within due bounds, it will flower the same autumn. The different variety of the China rose may be budded earlier than any other sorts, but in exactly the same manner. Dr. Van Mons, in a paper read before the London Horticultural Society, in 1824, says that there is no fear of the scions becoming quickly too dry, as he has budded from scions that had remained in a drawer two days.

*Grafting* is much more troublesome, and seldom so effectual as budding. In Flanders, *cleft grafting* is much practised. The

scion is either of the same diameter as the stock, or the cleft in the stock is made near enough the side for the bark of the scion, to come in contact with the bark or the stock on both sides; these are bound with ligatures of soft bass-mat, (first soaked in soap and water, and afterwards in a solution of alum, in order to render it impermeable to water;) this, binding, is then covered with a coat of clay, mixed with old slacked lime, made sufficiently thin to be applied with a brush.

Propagation by *Seed*, is merely practised where new varieties are wanted. Let the hips be gathered as soon as they are fully ripe, and thrown together in a heap, which must be frequently turned, until the husks are completely rotten; then clear the seed from them, and let it be sown about the latter end of February, it will come up about the beginning of July; in the spring following, let the plants be transplanted out.

To retard the blooming season, Mr. Hayward has already explained in page 15, of your Register. I have only to add that the practice is far from being a modern one, as I find it was successfully practised by the ancients.

*Pruning*, is not of the least importance: let every branch be shortened according to its strength, and cut out as much old wood as possible, without disfiguring the tree. The young wood intended to flower the following season, might be cut to about two or three eyes.

The rose is much infested with insects, particularly the Rose Plant Louse, (*Aphis rosæ*), which, however, may easily be destroyed by smoking, if the trees are in a house; and by making a solution of quick lime, soot and water, of about the proportion of one peck of each to ten gallons of water, if out of doors: after being well stirred together, and left standing until the water has become quite clear, take it out with a watering pot, and mix it with about one-sixth of strong tobacco water; which if applied to the roses with a syringe, will effectually destroy the *Aphis*, and generally some of the larvæ of other insects, which roll themselves up in the leaves and buds of the flowers. The rose Gall-fly, (*Cynips rosæ*), which receives its name from the rose-galls, it occasions by puncturing the bark; the Earwig, (*Forficula auricularia*), is very destructive to the flower; the Cow-lady, or Ladybird, as (*Coccinello 14 guttata*;) several of the species of the Crane-fly, as (*Cecydomyia*, and *Tipula*;) and some of the Sawflies, (*Tenthredinidæ*), such as *Hylotoma rosæ*, *Allanthus viridis*, and *Athalia rosæ*, all of which deposit their larvæ in the leaves and flowers, and which, if not picked off, will eventually destroy the bloom, if not the plant itself.

The sorts of roses most to be recommended for forcing, are the Red Provence, Moss Provence, and White Provence, for the first crops; and for later flowering, the Tuscany, Damask, and



**Maiden's-blush.** Let strong suckers, or layers, of these, be carefully taken up about the beginning of November, and planted in pots of about five inches diameter, inside measure, (upright forty-eights;) let the lower part of the plant be inserted rather deeper than it before grew. For this purpose it will be necessary to twist it round the pot two or three times, then fill the pot with a compost of vegetable mould and good light loam; prune the tops so as not to leave above two or three buds above the soil, then plunge the pots up to the rim, in an open, airy situation. Let them be shifted into larger pots every year, till they are large enough to place in twenty-four sized pots. The year after the plants are potted, introduce a quantity into the stove, place them in a situation where they receive about the heat of eighty degrees by day, and sixty by night; let every one of them be marked, as they must be placed first into the house every year, and so on with the rest in succession. The times proper to take them in, are (if the flowers are wanted about Christmas,) sometime early in October, the second crop in November, which will bloom in February, and so on every every month, until the natural season of flowering in the open air. Be careful to smoke the house every month to destroy the *Alphidæ*, and pick off all grubs, or your crop of flowers will fail. After they have done flowering, allow them to remain either in a frame or green-house for two or three months, until their wood is a little matured, for if they are too suddenly exposed to the open air while the wood is tender, (a method practised by many persons,) they receive so severe a check, that they seldom or ever mature their buds, so as to flower well the succeeding season. While they are making their wood, give them a good supply of water, mixed with a little dung of either deer, sheep, fowls, or pigeons; this will replenish the soil, and greatly assist the plant. When they have partly done growing turn them out of doors, placing them in a sheltered situation. Prune, pot, and introduce them into the house again in rotation, at the proper season, and for every hour's extra trouble they may have occasioned, you will be amply repaid by a most plentiful blow of fine flowers, and these at almost any season you may think fit.

I am, gentlemen, yours, &c.

RUSTICUS.

October 20, 1831.

ART. LXXIII.—*On Renovating Asparagus Beds.*

The following abstract of an article contained in the Memoirs of the Caledonian Horticultural Society, is taken from the Horticultural Register:

"Mr. Robertson says, in the year 1813, he found his asparagus quarter very much exhausted, by reason of the ground being too coarse and poor, and shoots having been too severely cut in former years. Having a quantity of furnace ashes which had lain for some years, he had them sifted, and mixed with a small portion of vegetable earth, formed from tree leaves; this compost was allowed to lie for about two months, and at the latter end of the month of October he commenced top-dressing, by taking off the old soil to about the depth of from six to nine inches; at least as deep as could be got without injuring the plants. The above compost of leaf-mould and ashes was then laid on, so as to cover the crowns of the plants, about four inches deep. On the approach of winter, the quarter was covered with stable dung, to prevent their being injured; and frequently, during winter, he poured as much of the drainings of the dunghill as could be collected; and by using these means, Mr. Robertson says, the shoots have been the best both in size, quantity, and quality, that he ever beheld.

"The top-dressing compost might thus be made:—

"One-fourth sandy peat-moss, from the service of a dry heath.

"One-fourth furnace ashes, well sifted.

"One-fourth vegetable mould, formed from tree leaves.

"One-fourth well-rotted stable dung, with a small portion of quick-lime.

"The whole well mixed together."

A friend informed us that he had for many years, when dressing his asparagus beds, removed all the soil, until he reached the crown of the plants, (taking care, however, not to injure the buds,) manure was then applied to the plants, which thus received the full benefits. The soil was then replaced, and nothing more was done, except to loose it with the fork in the spring. He had by this method, renovated several old beds, which had become very unproductive; he had also found it very efficient in keeping them in good condition. We have not tried it but agree with him, as to its utility, when manure is applied in the usual way, and forked in, a small portion only reaches the roots of the asparagus plants, which are covered several inches with soil, this, to be sure, is made very rich, but the roots cannot receive nourishment from what is buried above, and separated from them by extraneous matter. The only benefit they receive is from the salts which are carried down to them by the rain water filtering through. There is, also, (we are inclined to think,) an error in the mode of planting, and after culture, it is in planting them too deep. The finest we ever saw, were not more than two or three inches below the soil.—*Ed. So. Agr.*

---

**ART. LXXIV.—On an Economical Plan of Growing Apples, and other Fruit.**

[FROM THE HORTICULTURAL REGISTER.]

*Gentlemen*,—I have seen what appears to me a very economical plan of growing apples, or indeed any other kind of fruit, in a kitchen garden, a description of which I send you, and if you think it worthy of insertion in your Register, it is entirely at your service.

The trees are planted on the edges of the walk, dwarfs and standards alternately, and trained horizontally, by means of arbour-poles, so as to form an arbour, which be as pleasant in hot weather, in a kitchen garden, as an arbour of flowers would be in a pleasure garden; and if the walk should be wanted for wheeling dung, &c. to the borders, openings might be left for that purpose. The arbour-poles would last as long as the trees would require support, for after the arbour is formed, the trees will support themselves, the young shoots being tied to the old stems, to keep the whole covered with good wood. If this plan was more adopted, and fruit-trees planted after this manner in orchards, the vegetables and small-growing fruits, would have a more free air, and consequently be larger and better, than in the present way of growing them. In many inclosed gardens in England, the south side of these arbours, might be made up of peaches and apricots.

How would an arbour look, the size of the gate-way, and as high as the orchard wall, at Chatsworth, down the longest walk from the end of the garden? If covered with fruit, I think it would have a good effect; and the ground would be completely saved.

In the event of spring frosts, as in May last, the ground being covered with stems and young shoots, a degree of warmth would be confined in the arbour, which would allow the blossoms inside to set, and make the crop of fruit more certain, than in the old method. The apples this year, I perceive, are almost all in the middle of the trees.

I remain, yours, &c.

A PROMOLOGIST.

## PART III.

### MISCELLANEOUS INTELLIGENCE.

*Premium for Treatise on Gardening.*—We invite the attention of our readers to the accompanying Resolution of the Horticultural Society of Charleston, offering a premium for a "Treatise on Practical Gardening." The subject is an important one, and we hope that all who are competent will enter into the list of competitors. A work on practical gardening is much wanted for the Southern States, there is not one in existence at all adapted to their climate, with the exception of "Squibb's Gardener's Calendar," written shortly after the Revolutionary War, and which (being chiefly a compilation from Maw's Practical Gardener,) is erroneous in many particulars and cannot be followed with success. As no one appears disposed at present to write a new work on the subject, the Horticultural Society has determined to do what good they can in this way, and have, therefore, offered a handsome piece of plate for the best treatise, which it is hoped will be sufficiently good to answer the purpose of a calendar, at least until some one is induced to enter more fully on the subject.

*Ed. So. Agr.*

*"Horticultural Society of Charleston.*—At a recent meeting, the following Resolution was passed.

*"Resolved,* That for the best Treatise on Practical Gardening, adapted to the latitude of Charleston, a piece of Plate of the value of *Fifty Dollars* to be offered, on the following conditions, viz. The Treatise to be based on the supposed case of an area of ground, of a half acre in extent, which being unimproved, has consequently to be inclosed, laid out and cropped. The proprietor is desirous of cultivating not only Vegetables, but also Fruits in sufficient quantities for the use of his family, and to introduce a few Flowers. Each Treatise to be handed in, to the Recording Secretary of the Society, on or before the 1st of June, 1833, sealed, and accompanied with a note containing the name of the author, which will not be opened until after a decision is made. Such as may be handed in, will be submitted to a Committee of the Society, appointed specially for the purpose, who will be instructed to unite with them, a certain number of practical gardeners or gentlemen amateurs, in order to decide on the merits of the respective pieces. Every Treatise submitted and competing for the prize, will be considered as at the entire disposal of the Society.

JOHN D. LEGARE, *Recording Secretary.*"

*Reviving Plants, &c.*—The London Mechanics' Register gives a method of reviving plants, &c., which may prove useful to those who wish to revive scion buds, &c., when their leaves and buds are faded, and their bark and roots hard and nearly dry. The directions are to dissolve camphor to saturation in alcohol, adding the former until it remains solid at the bottom of the latter; a sufficient quantity of rain or river water is then to have the alcoholic solution added to it, in the proportion of four drops to one ounce of water. As the camphor comes in contact with the water, for a short time the camphor



will float on the water in small flocculi, but will ultimately combine with the fluid and disappear.

Plants which may have been removed from the earth and have suffered by a journey or otherwise, should be plunged into this camphorated water, so that they may be entirely covered. In about two or at most three hours, the contracted leaves will expand again, the young, faded, and dependent shoots will erect themselves, and the dried bark will become smooth and full. That being effected, the plant is to be placed in good earth, copiously watered with rain or river water, and protected from the too powerful action of the sun until the roots are taken good hold of the ground.

If plants thus treated, are not restored in four hours, their death may be considered as certain, for they cannot be recalled to life by any artificial means. They should, consequently, never be left more than four hours in the camphorated bath; because the exciting action of the camphor, when it is continued for a longer period, may injure the plants instead of doing good to them. It is not necessary to say, that the final prosperity of the plants thus reanimated by camphor water, must depend on the particular properties of the former, the state of their roots, and the pains that are taken with them. The camphor produces no other effect than to restore life to plants nearly dead: after that, all proceeds according to the ordinary laws, and their ultimate state must be left to art and nature.—*Amer. Far.*

*American Wine.*—We would here take occasion to remark, that the quality of the wine made by Mr. Herbemont is peculiarly adapted to the use of invalids. A few months since a respectable physician called on us for the purpose of obtaining some for a young lady in very delicate health, who could retain no other in the stomach. Several other kinds had been tried, and neither expense nor trouble spared to obtain the best wines, but none could be found that she could take, till by some means a bottle of Mr. Herbemont's was obtained, which was not only retained but highly relished, and had the desired effect. We are assured that both the Doctor and patient consider her entire recovery to be attributable to this wine. This is an important characteristic of Mr. Herbemont's wine, and enhances the value of it greatly. The wine that Mr. Herbemont calls the *white* wine, is really the most delicate and delicious flavoured of any we ever tasted. We tested its quality pretty extensively, having expended a considerable sample of it among *epicures* in the article, all of whom, without an exception, pronounced it *particularly fine*. The white wine is made from the same grape as the Palmyra, or Madeira coloured, but by a different process, by which the colouring matter is excluded with a great part of the astringency.—*Amer. Far.*

We learn with much satisfaction, that Mr. Abraham Geiger, (who some time since favoured us with an article on the culture of the vine,) has made this year 6500 gallons of wine from his vineyard, situated in Lexington District, in this State.—*Ed. So. Agr.*

*Jerusalem Artichoke.*—(Common Artichoke.)—*Mr. Goodsell*—I have often thought that this root might be rendered, under proper management, very beneficial and profitable to our farmers generally. Most of our farms contain gullies and other broken grounds inaccessible to the plough, but frequently abounding with small spots of rich alluvial soil, which if planted with artichokes would in a few years afford an excellent winter range for store hogs. This root requires little or no attention after the first planting, and will in a few years spread and fill the ground to overflowing with an excellent winter food for lean hogs; and when once well rooted in a loose and rich soil, can rarely if ever be eradicated. They should be allowed about three years to spread and grow before the hogs are turned upon them, after which, the rooting of the hogs will only tend to make them grow and spread faster, as the smallest

piece left in the ground will grow. Such is the result of my experience and observation on this subject.

Yours, &c.

R. M. WILLIAMS.—*Gen. Far.*

*Barking the Stems of Fruit Trees.*—A writer for the *Gardeners' Magazine* says, in substance, that his gardener in Holland, at the winter pruning, given in that country in February, cut off with his common pruning-knife all the outer bark, down to the liber, of his apple and pear trees, and vines, above eight or ten years old; not so deeply, however, with the young as with the old trees. This man's practice is said to have been always successful in producing larger and better flavoured fruit, than can be obtained without that process.

*Amer. Par.*

*To make the Bark grow over Wounds and diseased places in Forest or Fruit Trees, without fail, and with speed.*—When a branch is cut off a tree, or otherwise wounded, make the place smooth with a sharp knife; and if the tree be cankered, either cut away the part affected, or scrape it out until you come to the sound wood. In all cases, make the surface as smooth as possible; then put half a pound of tallow into two pounds of tar, and warm it over a fire, till the tallow is just melted in the tar; when one ounce of saltpetre should be added, and the whole stirred well together. The composition must then be laid on the parts that you want to heal: and I have found it, by long experience, to be an effectual cure, and superior by far to any thing yet practised.

*Gard Mag.*

*Ploughing and Hoeing.*—The utility of frequently ploughing and hoeing has been long known to practical agriculturists and gardeners. Ground often stirred with the plough or hoe in a drought will suffer far less than that not moved.

The reason of this effect I apprehend is not generally understood. It is sometimes said, that the destruction of the grass and weeds leaves more moisture for the corn or other vegetables. This, no doubt, is true—but it is not the sole or chief cause of the advantage of moving the ground in dry weather. Let any one turn up the soil in his field or garden in a drought succeeding wet weather, and he will see innumerable holes or channels leading from the surface deep into the earth. These channels are made by worms descending into the ground in search of moisture or for some other purpose. Through these holes the moisture is drained from the surface and leaves the plants to perish. When the ground is frequently stirred the continuity of these drains is broken and the moisture remains longer to nourish the plants.

C.—*N. E. Far.*

*To increase the Durability of Posts.*—It is said that by boring a hole of half an inch or an inch in diameter, near the surface of the ground, and at an angle of 45° with the same, nearly through the part, and filling the same with salt, that their durability will be greatly increased. As the experiment is simple, we hope some of our farmers will try it, and give the results to the public.

*Gen Far.*

*Hams*—Perhaps there is no subject of equal interest among farmers, on which there is such a contariety of opinion, as on that of curing hams. Almost every farmer, who is fond of good ham or wishes to procure a good price for it, has opinions, forms or receipts, peculiar to himself; and after all, the article is seldom procured in the country much superior in taste or flavour to that of common salt pork.

The plan which I pursue is extremely simple, and, I have no hesitation in saying, produces hams equal to any thing of the kind which I have ever tasted, not excepting the celebrated hams of Virginia, of England, or the still more famous of Calabria.

The hams, as soon as they are separated from the body of the animal, are to be closely packed in a clean, tight, common sized barrel; and to a full barrel add a pickle made by dissolving eight quarts of Liverpool salt and four ounces of saltpetre, in a sufficient quantity of rain or brook water to cover the whole. In this situation they are to remain until removed to the smoke-house, which should be from eight to twelve weeks.

The smoking process is to be conducted altogether with the wood of the sugar-maple or hickory; the former is preferred. And when sufficiently smoked, those that are intended for immediate use, may be hung up in a dark garret, or if the weather be too cool, in the cellar; as freezing, particularly if often repeated, is very injurious. Those that are intended for summer use, are to be well whitewashed with lime, and when dry, wrapped in paper and packed away in new dry house-ashes, and then set in a cool place in the cellar. Particular care is requisite to prevent its being heated too much while in the smoke-house, as this is very destructive to its fine flavour.—*N. E. Far.*

*Milk Powder.*—Fresh milk slowly evaporated over a fire will produce a dry powder. This is to be put in a bottle and closely corked. When wished for use, a suitable quantity is dissolved in water. It will, it is said, have the taste and all the properties of milk.—*Amer. Far.*

*Whitewashing.*—It is a very common practice to whitewash rooms, walls and fences, with simple lime and water. The result is, that a touch brings it off upon the hands or clothes, and a few successive rains leave almost bare the materials upon which it has been laid, and which are exposed to the weather. On in-door work, a little glue will fix it so that it will not easily rub off, nor whiten the press that happens to come in contact with it. Out of doors, glue alone will not answer; skimmed milk is probably the cheapest and best ingredient that can be easily procured. Those who put on whitewash without any thing of this kind to retain it, act on the same principle as if they should fill a sieve with water, or cover a house with boards without nailing them.—*Lynn Messenger.*

*Curious Palm.*—At a late meeting of the Linnæan Society, was read an account by Lieutenant-colonel Bowler, accompanied by drawings, of a curious species of Palm, apparently identical with the *Doum Palm* of Upper Egypt (*Hyphæne coriacea* of Gærtner,) found in the Cutcherry Compound at Masulipatam, and also near Kongaram in the Telooogoo Compound, both in the Government of Madras. The trees were from 18 to 50 feet high, with their stems generally twice forked, but some were found with an elongated simple stem having as many as six heads. The fronds are used by the natives for thatching, and the hard fibrous nuts, when steeped in water and beaten, are made into brushes for whitewashing their houses. Colonel Bowler observes, "The Sunasies, whenever they can procure them, carry the stalks of the fronds in their hands, and impose upon the ignorant natives, by attributing to them many surprising virtues, and pretending they cut them from a curious tree which was in a large forest at an incalculable distance.

"The inhabitants of Kongaram and the neighbouring hamlets look upon this tree as the guardian of their jungle, and hold it in some degree of veneration; conceiving it has, as I am told, its Sanscrit name *Kalpa Vroochum* implies, the power of fulfilling desires and wishes of mankind, at least such as from firmness of the heart and morals have faith in its supposed virtues." The tree had probably been introduced from Egypt by the Arabs.

The paper and drawings were communicated by the council of the Royal Asiatic Society.—*Philos. Mag.*